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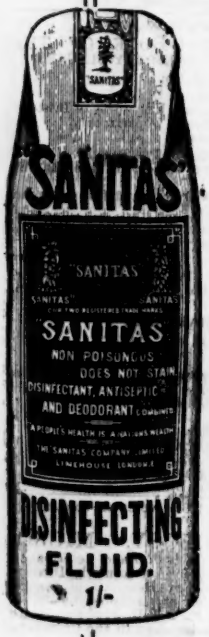

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A Presidential Address
ON
SOME INDUSTRIAL ACCIDENTS AND DISEASES.

Delivered in the Section of Industrial Hygiene at the Congress of the Royal Institute of Public Health at Paris on May 16th, 1913,

BY SIR THOMAS OLIVER, M.D. GLASG., F.R.C.P. LOND.,

PROFESSOR OF PRACTICE OF MEDICINE, UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

GENTLEMEN,—A century ago factory owners, in order to increase production and have a reliable source of energy, substituted steam for water as the motive power. This was followed by industrial and social events of a far-reaching nature.

INDUSTRIAL EMPLOYMENT OF ELECTRICITY.

The replacement of steam by electricity in modern days is not less again a step in advance of that of previous decades. One effect of the replacement of water-power by steam was dislocation of industries. Factories came no longer to be built upon the banks of rural streams but in towns where labour was abundant, or in close proximity to coal-fields where fuel was cheap. One of the drawbacks to the use of coal is the smoke which is created. This shuts out sunlight and so contaminates the atmosphere as to render it less fit for breathing purposes, while it increases the susceptibility of the respiratory organs to disease. Some of the large iron manufacturing districts in England have always a high death-rate from pneumonia and acute bronchial affections. It is known that since Germany has become more industrial her mortality-rate from pulmonary diseases other than tuberculosis has markedly risen, and this, too, during a period when the number of deaths from pulmonary tuberculosis has been falling. For this rise in the mortality-rate the increasingly large volumes of smoke thrown into the atmosphere are said to be answerable. Where electricity is the motive-power in factories and on railroads the atmosphere remains clear. By substituting electricity for steam one danger at least is thus got rid of; but electricity has dangers of its own, dangers of an acute and serious nature, and so subtle in their incidence as frequently and unexpectedly to entrap the unwary.

Electrical Accidents.

We can never tell exactly what number of deaths from acute pulmonary diseases are due to the effects of smoke and fog alone, but in countries where deaths from electrical injuries are notified the number of persons killed, also the number of persons seriously injured, can be estimated. In Great Britain the number of electrical accidents occurring in generating stations during 1911 was 74, compared with 58 for 1910, the number of deaths being 4 for each year. In factories the cases numbered 290 for 1911 and 276 for 1910, the deaths being 7 in 1911 and 5 in 1910. It is interesting to note that while in Great Britain the use of electrical energy for motive-power has risen from 30,999 horse-power in December, 1902, to 774,000 in December, 1911, there has been practically speaking no increase in the number of electrical accidents since 1907. The check in the number of accidents, according to the electrical inspector of factories, followed the issue of draft regulations by which the attention of occupiers and engineers was directed to questions of safety. The numbers given refer only to accidents in factories and generating stations; for taking the number of deaths from electricity all over the country they were 29 in 1909 and 26 in 1910, only 9 of these in 1910 occurring in generating stations and factories. As bearing upon the growing application of electricity to the industrial needs of France the increasing number of persons notified as having suffered from electrical injuries is not without significance. In 1907 there were 571 persons injured; in 1908, 773; in 1909, 778; 909 in 1910; while in 1911 the numbers rose to 1027. Taking the figures for 1911, which M. Boulin, inspecteur divisionnaire de travail of Lille, has sent me, of those injured 52 died, 12 were permanently incapacitated, and 927 were temporarily indisposed; of the remainder the results are not stated. To the above must be added other 30 persons injured in connexion with mines; of these 4 died, 1 was permanently incapacitated, and 25 temporarily so.

It is no light toll which this comparatively unknown power so recently introduced into our industries is exacting from the workers. It is one in regard to the operation of which working men must be ever on their guard, for the occasions upon which electrical currents can be used will not tend to diminish as time goes on, but to increase. Apart from its use as an illuminating agent and for motive purposes it is impossible as yet to estimate the dangers likely to arise in industrial enterprises where electricity is becoming increasingly employed. Old methods of production in chemical works are disappearing, new methods into which electricity enters are taking their place, and these are not free from danger. Because the current can be readily turned on in a factory, electricity is a force of wide application. It has been used, for example, for drilling iron plates, but the electric drill has been superseded by that worked by compressed air on account of this drill being driven more rapidly and effectively.

Causation and Nature of Electrical Accidents.

Where men have succumbed to electrical shock there may be no external marks to explain the fatality. In other instances there are burns. These when present are irregular, frequently deep, and extend down to the bone. I shall not dwell at length upon the question of what pressures of electrical currents are within the limits of safety. To measure the pressure or tension of electrical currents the term "voltage" is employed, while by "ampèrage" is meant the rate of flow. "Alternating" currents are usually regarded as more dangerous than "continuous." When death has been caused by electricity the question is generally asked, What was the voltage of the live metal at the time of the accident? The influence of ampèrage ought, however, to be considered as well as voltage. Voltages above 1000 are dangerous, but Jellinek reports a fatality where the individual had been brought into contact with only 65 volts. It is the mode of contact which is the important circumstance, also the unexpectedness of the contact, for electricians can, and do, frequently touch with their hands wires carrying currents of 5000 volts and more without experiencing any serious inconvenience. Much depends upon whether at the time of contact the skin is dry or moist, whether the workman's clothes and boots are dry or not, also whether he is standing on damp earth. The thick, hard, and dry skin of a workman's hand is less favourable to the penetration of an electrical current than the delicate or moist skin of a clerk. Although intangible, electricity is a saleable product. As a commercial commodity the dangers incidental to its generation and transmission bring it within the range of industrial hygiene. A few years ago my colleague, R. A. Bolam, and myself, by a series of experiments upon animals, satisfied ourselves that death in electrical shock from continuous currents is due to arrest of the action of the heart, and that by means of artificial respiration carried on for a considerable time dogs apparently killed could be resuscitated. In a few of our experiments, just as in those of M. Prévost and M. Batelli, death came through stoppage of the breathing as well as by arrest of the heart's action. No matter how workmen have been struck by an electrical discharge with an apparently fatal result, artificial respiration is the only reliable method to adopt to restore life.

My object in alluding to the dangers incidental to electricity is not simply to point to the increasing demand for electricity in industrial concerns nor to explain how death comes, but to draw attention to an opinion which has been advanced by M. Prévost and M. J. Reverdin, of Geneva. The burning and destruction of the skin in electrical injuries have a significance which ought not to be overlooked. Burning means bad rather than good contact. Once charring and destruction of the superficial skin have taken place, resistance to further penetration of the current is increased and death is thereby possibly averted. I have seen men with severe electrical burns recover, and I have also seen death

take place where there were extensive burns, but the opinion advanced by M. Prévost and M. Reverdin based upon experimental injury is that, where burns do not occur, the current enters more readily and the victim is more likely to die, while if burns have been inflicted the individual is more likely to survive.

DUST: SERIES OF EXPERIMENTS.

Dust is the *bête noire* of industry. How to get rid of it is the important problem. Although dust is generally spoken of as matter in a state of fine division, it is something more than this. As a prelude to colliery explosions it is not alone that coal is present in the atmosphere in the form of extremely minute particles, but that each particle is surrounded by a layer of gas which imparts buoyancy to it and enables it to remain suspended in the air, even although it is heavier than the atmosphere. The minute particles of dust in factories and workshops are frequently similarly enveloped, but in these places, owing to the circumstances under which dust is generated should moisture be present, instead of there being gas, the particles are surrounded by a layer of moisture which renders the dust more likely to be absorbed by the respiratory mucous membranes should it perchance be inhaled. It may be perhaps on account of electrical conditions, the finely divided state of its particles, or, what is more likely, as the result of the operation of circumstances of which at present we know little, that coal in the form of dust and in the presence of atmospheric air or gas behaves somewhat differently from coal in bulk. Placed under the same conditions as regards temperature, the gaseous interchange does not always run concurrently in the two substances. To show the difference between coal in the lump and coal in the form of dust, Hermann Belger, of Armstrong College, and I carried out a series of experiments in the Durham University College of Medicine, Newcastle-upon-Tyne. We exposed to atmospheric air (1) coal in the lump and (2) coal in the form of dust. Coal when removed fresh from the mine gives off gas freely; the greater part of this is methane, so that if dust is examined which is lying in the crevices of the rock in the mainways of a mine it contains probably not 1/10th of the amount of methane which is present in lump coal. This difference is what might be expected from the elimination of gas which is going on, and yet in coal dust there is almost constantly taking place an exchange of gas and not a discharge only. It is in this respect that the behaviour of coal in the lump and in the form of dust is not identical. Coal dust is not quite the inactive substance it at first sight appears to be, and yet it possesses nothing like the activity of lump coal, as Figs. 1 and 2 show. In my laboratory the same coal, of Pennsylvanian origin, in lump and also in powdered form was exposed to atmospheric air. In No. 1 experiment the coal dust loses from the first, but it exhibits during the 24 weeks gains and losses which it is difficult to explain, unless it be by the absorption, loss, and re-absorption of gas rather than of moisture. At the end of 24 weeks the coal dust had lost 0·23 per cent. of its weight. On the other hand, lump coal under similar conditions, except that it was exposed to daylight, immediately gained weight to the extent of 1·5 per cent., remained fairly stationary for a period of four weeks, then lost weight to 0·4 per cent., but subsequently recovered some of this weight, so that at the end of 16 weeks it stood with a gain of 1·1 per cent. It cannot be said that the temperature or barometric pressure played a noticeable or special part in the process. Experiment No. 2 brings out even more forcibly the greater activity of coal in the lump compared with coal dust. It required 24 weeks for coal in the form of dust to lose 3·5 per cent. of its weight; but in 16 weeks coal in lump form lost 5·9 per cent. of its weight. In coal-mines there is therefore constantly going on an interchange of gases, the replacement of lighter gases by heavier and *vice versâ*, a form of respiration, in a word, which must have some influence not only upon the air of the mine from the respiratory point of view of the coal-miner, but it must also play not an unimportant part in the initiation and spread of colliery explosions.

Although at first sight apparently a trivial subject, the behaviour of dust in daylight and in darkness, in currents of air and in moist and dry atmospheres, also its influence upon industrial life, are among the most important industrial problems of the age.

WHITE LEAD AND ITS DANGERS.

A Congress such as this could hardly meet in Paris without reference being made to white lead and its dangers. The desirability of finding substitutes for white lead, especially for purposes of house decoration, has for the last six years and more been the subject of serious debate in both Houses of the French Legislature. A decision has at last been come to. By the Act of July 20th, 1909, it is stipulated that after Jan. 1st, 1915, the use of white lead, mixtures of linseed oil and lead, also of products containing white lead, is forbidden in all kinds of painting carried on by working painters, whether in the interior or the exterior of buildings. Even now a large number of master painters and decorators are prohibiting the use of white lead for internal decorative purposes. At present white lead is not allowed in the painting of most of the Government buildings. As far back as July, 1902, a decree was promulgated in France which regulated the conditions under which lead could be used in the painting of buildings. Since it is this decree which prepared the way for the application of prohibitory measures, it might be well to reproduce some of its clauses:

Article 1.—White lead must only be used in the form of a paste in the workshops of house painters.

Article 2.—In house painting it is forbidden to use with the hand products containing lead as their basis.

Article 3.—Scraping off of paint containing white lead, also the dry rubbing-off of paint by means of pumice stone are prohibited.

Article 4.—Where the scraping-off of paint containing white lead is effected by the wet method, also where rubbing off is done with pumice stone in the moist form, employers must place at the disposal of the workmen overalls for the men's exclusive use for this kind of work, and employers must see that the men wear these overalls, which must be kept in good order and frequently washed. Everything necessary for the purpose of cleanliness must be provided at the place where the work is carried on. Workmen's tools and accessories must be kept in good order and their cleaning effected without dry scraping.

Article 5.—Employers must affix the text of this decree in those parts of the factories where new hands are taken on and where the workmen are paid.

The attitude assumed by France in this matter has attracted in Great Britain the attention, not only of Members of Parliament and social reformers, but of persons employed in the manufacture and use of paints containing lead. The Association of Paint and Varnish Manufacturers has, by a series of questions issued to the users and sellers of paints in the various towns of England and Scotland, tried to obtain opinions as to the desirability of replacing lead by some such comparatively harmless compound as zinc white. Of 45 who replied, 43 expressed themselves in favour of white lead for the exterior of buildings; for inside work 17 preferred zinc white to lead. For internal decoration it seems to me there is no reason why zinc white should not be adopted, while for the external painting of houses it does not appear to the majority of master painters—and these are the men who ought to know—that zinc white possesses quite the covering power and the durability of white lead. Experience alone can decide, but even if it can be demonstrated that white lead is superior for external decorative purposes, reformers will maintain that the gain is not worth the cost to human life, since among house painters there is a large amount of sickness which is preventable, while death from lead poisoning is not uncommon.

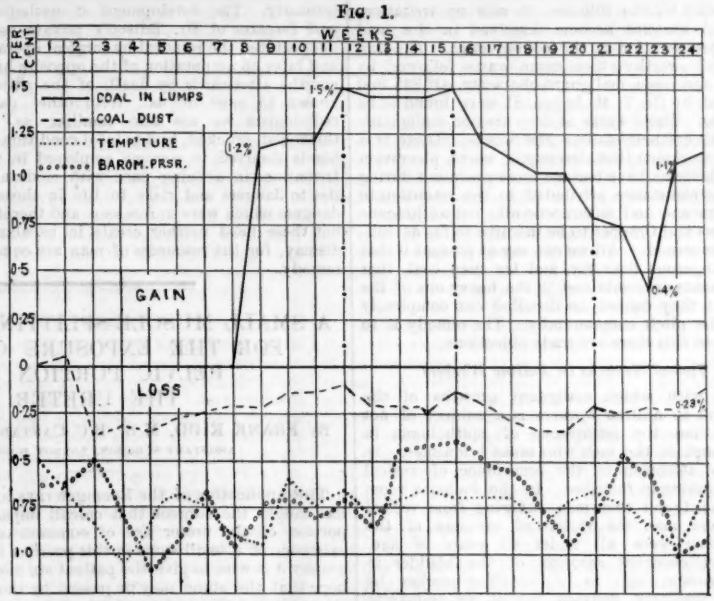
IS OCCUPATION A CAUSE OF CANCER?

This is a question not without significance at the present time, since in some countries there is a distinct rise in the mortality rate from cancer. A few years ago I drew attention to the occurrence of warts on the arms of men who were engaged in boiling and mixing oils obtained from shale, and I pointed out that the warts break down and become converted into epitheliomatous ulcers. For such a form of epithelioma one of my patients had his right forearm amputated, but the operation did not save his life, owing to secondary deposits in the internal organs. The relationship of the products of the incomplete combustion of coal and cancer has long been known. There is a difference between raw coal and the products obtained from it during combustion. Manipulation of coal is not attended by any risk of cancer, but the handling of soot, for example, predisposes to it.

In Great Britain we are familiar with chimney-sweep's cancer. Something, therefore, is present in soot in a chemically active form which irritates the skin and leads to cancer. That the scrotal cancer of chimney-sweeps is the result of irritation caused by soot is confirmed by the youthful

age and occupation of its victims. Years ago Earl published notes of three cases of cancer occurring on the hands of gardeners who had been distributing soot among plants. All the men were under the age of 30. Earl's father described a case of cancer of the scrotum in a boy 8 years of age who was a chimney-sweep, and Sir James Paget observed the disease in the ears of workmen who had carried sacks of soot on their shoulders. Mortality figures show that in England and Wales cancer among chimney-sweeps is twice as frequent as in occupied males generally. The comparative mortality figures for cancer among chimney-sweeps between the ages of 26 and 65 was for the three years ending 1903 133, as compared with 63 occupied males at the same ages.[1] We must therefore admit that the chimney-sweep's occupation is a cause of cancer.

FIG. 1.

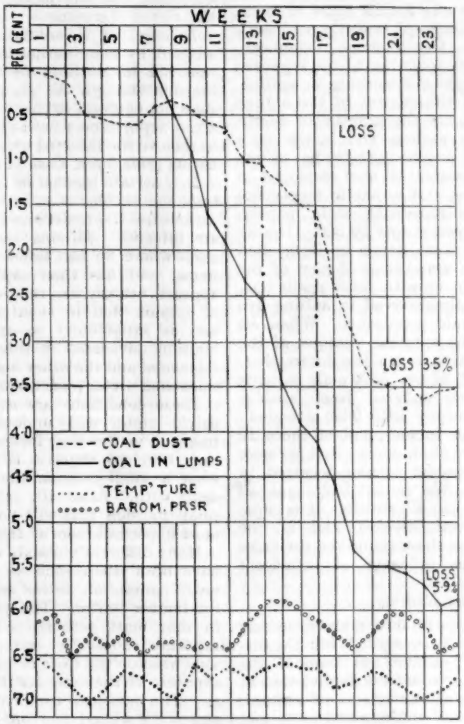


Weekly alteration of weight of coal in lumps and in form of dust. Bituminous Pennsylvanian coal, U.S.A.

Gasworks Pitch and Cancer.

It has long been known that persons engaged in the distillation of tar and the manufacture of grease and of briquettes, which contain coal tar oils, exhibit a peculiar swarthiness of the skin and are liable to warts and epithelioma, but it is only recently that any serious attempts, based upon clinical experience, chemical inquiry, and pathological investigation, have been made to explain the reason why, in the manufacture of patent fuel, cancer is found in men who work with gasworks pitch and not with that obtained from blast furnaces. Allusion must therefore be made to the excellent work which has been done in this direction by Mr. H. C. Ross and Dr. J. W. Cropper, of the Lister Institute, London, also by Mr. H. Bayon, of Cape Colony. Pitch is made from tar and tar from coal. In gasworks, coal is placed in retorts and heated. The gas given off is collected and distributed for illuminating and heating purposes, while the ammoniacal liquor which is formed has a commercial value. The residue left in the retorts is tar. This is sold to tar distillers, who by carrying the distillation further obtain phenol, creosote, naphthalene, and other valuable saleable products The residue of this distillation is known as pitch. For making briquettes, small coal, anthracite dust, and pitch are used. Pitch and coal dust in the proportion of 9 of pitch to 10 of coal dust are intimately ground together and thoroughly mixed. The material is then taken to the pug-mills, where it is moistened by steam, and passed on to the presses where it is moulded into the forms with which we are familiar. Ross and Cropper took watery extracts of the tar from which briquettes are made and tested their effects upon individual cells *in vitro*. In gasworks tar they found certain chemical products which were not present in blast furnace pitch. There were found in gasworks tar *auxetics*[2]—that is to say, chemical bodies liberated from cells at their death, and which when absorbed by the living cells of the tissue of an injured part stimulate these cells to unwonted activity, thereby favouring the healing of wounds; also *kinetics*, bodies which as augmentors excite amœboid movement in leucocytes and epithelial cells. Acting in coöperation these two bodies stimulate cell growth, auxetics causing benign cell proliferation and kinetics cell proliferation which tends to malignancy. Watery extracts of gasworks tar and of blast furnace tar were taken and injected separately into the subcutaneous tissues of animals, with the result that cell proliferation and swellings were always produced at the site of the inoculation with gasworks tar, while no such swellings akin to those caused by the gasworks product followed the injection of blast furnace tar. The harmful bodies present in the gasworks tar must therefore be the auxetics and kinetics. It can hardly be, at any rate, the pitch dust, since no dust was present when Ross and Cropper carried on their experiments. When men are making briquettes in an atmosphere laden with pitch dust and are perspiring, the falling dust adheres to the moist skin, and

FIG. 2.



Weekly alteration of weight of coal in lumps and in form of dust. Sub-bituminous Pennsylvanian coal, U.S.A.

[1] Report of Committee on Compensation for Industrial Diseases, p. 9.

[2] The Problem of the Gasworks Pitch Industries and Cancer. The Wm. Howard McFadden Researches, London, John Murray.

becoming impacted in the follicles, it sets up irritation. The auxetics and kinetics become dissolved in the acid sweat, and cell proliferation is the consequence. The skin becomes dark and swarthy; then come warts followed by ulceration which assumes a malignant character. Of 245 fuel workers examined by Dr. T. M. Legge, 51 were found to be affected by warts. These warts at first are non-malignant. They only become epitheliomatous afterwards. There is a belief among the workmen that dermatitis, warts, ulceration of skin, and epithelioma have become more prevalent during recent years, a circumstance attributed to the retention in the pitch of anthracene and anthracene oil; but anthracene was found by Ross and Cropper to be inactive so far as cell-proliferation is concerned. All we can say at present is that pitch is more dangerous than tar, and tar than coal, that the harmful elements are contained in the heavy oils of the coal tar, and that they cannot be distilled out completely without ruining the pitch commercially. The remedy is to wash the tar, but to this there are trade objections.

Malignant Vesical Growths in Aniline Workers.

The frequency with which malignant growths of the bladder are found in aniline workers is a subject of not less importance than the occurrence of epithelioma in chimney sweeps and in the men who make briquettes. In 1895 Rehm drew attention to the occurrence of vesical tumours in men working in fuchsine. In the fuchsine room of one factory he found two men suffering from vesical papilloma and one man the victim of sarcoma of the bladder. The men were all under 45 years of age. Leichtenstern had observed sarcoma of the bladder in a naphthalene worker, and in a toluidine worker he found a growth similarly situated but of an indefinite character. By 1904 Rehm had collected data of other 20 cases of bladder tumours in aniline dye workers: 8 were carcinoma, 5 papilloma, and in 7 the type of tumour was uncertain. In 1906 he found that in 18 German dye factories in which aniline and aromatic bases were used, there had been between 1888 and 1906 33 cases of malignant disease of the bladder; 18 of the men had been operated upon, the other 13 had died; 11 of the workmen were still alive, some had had recurrences; each of the patients had been in the dye works for 20 years or more. Leuenberger, of Zürich, in his monograph recently published, gives the history of 18 cases. Grandhomme, Offenbach, and Fechenheim have expressed doubt as to the supposed connexion between bladder growths and working in aniline. As the town of Basle is one of the centres of the aniline industry, it may be well to compare the number of deaths from vesical growths in aniline workers and in the male population general of Basle. The aniline industry has of late made rapid strides. The total number of men employed in the manufacture of aniline dyes and aromatic substances during 1901–10 was 840; the remaining male population of Basle during the same period was 56,500. During that decade six aniline dye workers living in Basle died from bladder tumour, and in the same period 12 men of the general population. Vesical tumour with fatal result was, therefore, 33 times more frequently observed in aniline dye workers than in the general male population. When we study the figures supplied by the surgical clinique of the University of Basle the information is not less interesting. Taking the 10 years ending 1900, of the 5500 male patients who attended the clinique, four suffered from bladder tumour. During the 10 years ending 1910 9650 attended; of those, 16 were cases of bladder tumour, and of these 10 were aniline workers and two were cloth dyers; that is, more than one-half of the cases of bladder tumour occurred in aniline workers and cloth dyers. We cannot look upon all of this as a coincidence. It is an illustration of occupation being a cause of malignant disease, and of the necessity for bringing to bear upon these trades the resources of industrial hygiene and the influence of beneficent legislation.

Roentgen Rays and Radium.

Just as each new invention brings its own malady, so may disease follow in the footsteps of discovery. While the discovery of Roentgen rays and of radium has been of the greatest service to the human race, men have died victims of their influence. Burning is one of the effects of radium. Death has claimed through painful suffering and prolonged illness men who have worked with Roentgen rays of high intensity. The development of epithelioma upon the hand and forearm of Mr. Edison's private assistant, and which necessitated the removal by surgical operation of the forearm and later on amputation of the opposite hand, followed a few months afterwards by death of the patient, are facts well known to most of us. With other cases of cancer in radiologists we are also familiar, as well as with the thickened, cracked, and painful condition of the skin of the hands observed in persons employed in this kind of work. Inventions in keeping pace with modern requirements give rise to dangers and risks to life in those who work them, dangers which were unforeseen and therefore not expected; but these need neither create in us alarm nor fill us with dismay, for the resources of man are equal to supplying the remedy.

A SMALL MUSCLE-SPLITTING INCISION FOR THE EXPOSURE OF THE PELVIC PORTION OF THE URETER.

BY FRANK KIDD, M.B., B.C. CANTAB., F.R.C.S. ENG.,
ASSISTANT SURGEON, LONDON HOSPITAL.

THE application of the Roentgen rays to clinical medicine has taught the surgeon that calculi impacted in the pelvic portion of the ureter are of common occurrence. If the existence of a small stone in this position is proved by radiography it is wise to give the patient six months' grace in the hope that the stone may be passed by the natural channels, this passage being encouraged by injecting sterile lubricants into the ureter below the stone. Three-grain doses of urotropine should be taken three times a day throughout this period to prevent hæmatogenous infection of the blocked kidney, and a large amount of Contrexéville water should be taken every day before breakfast so as to flood down the stone from behind. If at the end of this period the stone has not passed it ought to be removed by means of operation in order to save the corresponding kidney from atrophy and infection, and the ureter itself from stricture formation at the site of the stone.

In cases of tuberculosis of the kidney and ureter it is advised by some authorities that the pelvic ureter should be removed in addition to the kidney by means of a fresh incision through the inguinal muscles. Even if a surgeon does not conform to this rule, he will meet with cases where after nephrectomy for tuberculous kidney he will be driven to remove the infected ureter for sinus formation and urinary fistula (*vide infra*, Case 12).

In a certain number of cases of tuberculosis of the urinary tract the bladder is so irritable that it becomes impossible to catheterise the ureters and determine if one or both kidneys are infected. Rovsing has published an account of many cases where he has failed to make a diagnosis by the cystoscope, and has then explored both kidneys, and if one appears healthy has removed the other with success. I am of opinion that in such cases it may turn out to be simpler and as satisfactory to expose both ureters by the small incision advocated in this paper, and if one is found to be thickened and the other not, to remove the kidney with the thickened ureter (*vide infra*, Cases 11 and 13).

These conditions are so common that operations on the pelvic ureter will undoubtedly become more and more frequent in the near future. Yet, judging by recent literature, I do not think it is at all widely recognised through what a small incision the pelvic ureter can be exposed and dealt with. After all, from the patient's point of view, a small incision that will not lead to a hernia is one of the most important facts of the operation.

Many different methods of approach to the pelvic ureter have been tried, such as the vaginal, vesical, rectal, perineal, parasacral, intra- and extra-peritoneal inguinal and ilio-lumbar routes. The problem has so far been simplified in that most authorities are now agreed that: (1) the exposure should be extraperitoneal; and (2) an incision somewhat on the lines of Sir Astley Cooper's incision for the exposure of the external iliac is the type of incision to aim at. The incisions usually advocated are needlessly large, and as the wound has to be drained it is clear that there is considerable risk of ventral hernia. Many of the subjects of

ureteric stone are young men in the prime of life, and it is not good surgery to condemn such men to a ventral hernia if it is possible to avoid it.

I have devised an incision which appears to me to pass all the tests of a perfect abdominal incision. It is small—that is to say, it is only three inches long. It is a muscle-splitting incision, and it crosses no nerve trunks or large blood-vessels. It cannot, therefore, give rise to a hernia, yet through it the whole of the pelvic ureter can be isolated and explored, and the operations be performed of ureterolithotomy, ureterectomy, and cysto-ureterotresis.[1]

I propose first to describe the incision and the operation for removal of stone in the lower ureter; secondly, to explain the rationale of the incision and the facts on which it is based; and finally, to add a list of the various operations which I have performed in the last two years through it.

Description of Operation.

The patient is anæsthetised, preferably by stovaine spinal anæsthesia, and placed in the Trendelenburg position in order that the intestines may fall out of the pelvis and that light may penetrate the depths of the wound. An incision is made through the skin and superficial fascia two fingers' breadth (one and a half inches) above and parallel to Poupart's ligament. It is three inches long, and should extend from the edge of the rectus muscle two inches outwards and one inch inwards. The centre of the incision lies vertically above the internal abdominal ring.

The external oblique aponeurosis having been recognised and cleared of fat, the incision is carried through it in the direction of its fibres one inch inwards in front of the rectus muscle and two inches outwards from that muscle. The external oblique aponeurosis does not usually fuse with the internal oblique aponeurosis to form the anterior sheath of the rectus muscle until at least one inch inside the edge of that muscle. The cut edges of the external oblique aponeurosis are retracted so as to expose the internal oblique muscle and its sheath, the fibres of which at this point are horizontal or run slightly inwards and upwards and in the same direction as the fibres of the transversalis muscle. The incision is now carried through these two muscles in the direction of their fibres for two inches outwards from the outer edge of the rectus muscle and one inch inwards through the anterior sheath of that muscle. By this step the edge of the rectus muscle is clearly exposed, and the muscle belly must now be gently separated from its posterior sheath and retracted firmly inwards. By this manœuvre much extra space is gained, and it is now possible to see the deep epigastric vessels as they pierce the transversalis fascia and insinuate themselves in front of the semilunar fold of Douglas to enter the rectus sheath.

A finger placed just external to and above the point where the deep epigastric vessels enter the rectus sheath is made to tear its way through the transversalis fascia into the layer of retroperitoneal fat. The transversalis fascia is so thin at this point that it is not advisable to try to divide it as a distinct layer with the knife for fear of opening into the peritoneum. The transversalis fascia can then be divided with a blunt-pointed bistoury outwards for the full length of the wound. The finger must now be used to separate the peritoneal coat in the layer of the subperitoneal fat from the back wall of the iliac fossa and the side wall of the pelvis. In the male the first structures encountered on the back wall of the fossa are the vas deferens, which should be cleared and retracted downwards and inwards, and the spermatic vessels, which should be cleared and retracted upwards and outwards. In the female the ovarian vessels and round ligament correspond to these structures and should be treated in the same manner.

The external iliac artery, easily recognised by its pulsation, is now cleared and followed up till the common and internal iliac arteries are likewise cleared. The ureter crosses the brim of the pelvis *over the external iliac artery* and runs down the side wall of the pelvis parallel to and just in front of the internal iliac artery. It lies attached to the peritoneal coat by means of a thin fascial envelope, and it tends to be stripped inwards and upwards with this coat. For this reason there may be some difficulty in recognising it; but by rolling the parts between the finger and thumb one can usually detect it and strip it out of its bed by means of two pairs of dissecting forceps nine inches long specially designed for this work. While this is being done it may be necessary to have the parts strongly retracted with long narrow-bladed retractors and to make use of a head lamp.

The ureter is to be exposed at the point where it crosses the external iliac artery and cleared out of its bed for two or three inches above and below. A blunt hook is passed beneath it so as to steady it and bring it nearer to the surface. Two stitches of the finest chromic catgut on the finest curved needles held in a modified Halsted's needle-holder are inserted through the walls a short distance apart and parallel to one another in the long axis of the ureter. These serve as retractors to steady the ureter for incision. In these cases the urine is usually aseptic, so that it suffices to place strips of gauze beneath the ureter to soak up the escaping urine; but if the urine is very septic it is advisable to clamp the ureter with a fine pair of intestinal clamps above the level of the proposed incision. By means of a sharp tenotome a tiny longitudinal incision is made into the ureter. A ureteric bougie is inserted down the cut and the position of the stone noted. Special ureteric stone forceps are then gently insinuated down the tube, and a few trials are generally successful in grasping the stone and lifting it out of the wound. A bougie is passed into the bladder to make sure the way is clear. The cut in the ureter is united by a single layer of finest chromic catgut stitches passing through all its coats. This layer is covered in by another layer taking up the peri-ureteric tissues and covering in the first layer.

When the ureter is much dilated this procedure is easy, but in a small ureter it needs care and patience. When properly performed I find that no leakage of urine occurs at all, and the wound heals by first intention and without any suppuration. This is such a great gain for the patient that I cannot agree with those who recommend that the wound be left unstitched or only partially stitched. It is true such a wound will heal up in time, but at the cost of a lengthened convalescence and a weakened scar, and with the added risk of infection of the urine itself.

The advantages are great of removing the stone in this manner. The stone is brought up to a healthier portion of the ureter than that in which it lies so that the wound can heal by first intention, and there is less risk of subsequent stricture formation. If at first the stone cannot be dislodged with forceps and brought up to the pelvic brim, one can often accomplish this by inserting a gloved finger into the vagina or rectum and manipulating the stone upwards from below. Should this manœuvre fail, as it did in Cases 2 and 6, the ureter must be cleared out of its bed right up to the wall of the bladder. In the female the uterine artery and vein have to be cut between two ligatures before one can get at the lowest portion of the ureter, and in the male the obliterated hypogastric or superior vesical artery may have to be cut across, and the vas strongly retracted upwards and outwards. In this way I was able to remove two stones which were almost intramural by cutting down directly on to them in the lowest part of the ureter. Even at this depth stitching of the ureter can be carried out if patience be exercised.

When the wound in the ureter has been dealt with the peritoneum is allowed to fall back into place, a long strip cut from a rubber glove being carried from the site of the wound in the ureter up and out of the wound at the edge of the rectus. Such a drain has been found by experience to draw off fluid as well as a tube, and after it has been removed leaves practically no loophole in the wound for escape of a hernia. The split fibres of the internal oblique and transversalis muscles are united with chromicised catgut outside the drain. The cut anterior sheath of the rectus formed by the aponeurosis of the muscles is then united in similar fashion inside the drain. The split external oblique aponeurosis is united with a second layer of stitches, and finally the skin is united with silkworm gut.

The patient is nursed for the next two days turned over on to the side on which the wound lies and with the head down so as to encourage drainage. As a matter of fact, no leakage occurred in any of my cases except Case 2, and the wound being firmly healed the patient has been allowed up on the tenth to the twelfth day and has usually left the hospital by the fourteenth to sixteenth day. Urotropine is given regularly both before and after the operation so that

[1] In cases of acute appendicitis, when the effusion is inguinal and pelvic, this incision gives much better access to the parts than the usual gridiron or Battle's incision.

the urine does not become infected, and the patient goes out with the urine perfectly clear.

Certain difficulties that may be encountered should be mentioned. If there is much peri-ureteritis it may be difficult to peel the ureter out of its bed. Again, in Case 4 the ureter was so dilated that for some little time it was mistaken for the sigmoid flexure. Its true nature was only recognised when its wall was incised and urine gushed out. Finally, if a stone has been impacted for two years or more in the lower ureter, a stricture is likely to form at the site of the stone after this has been removed, as happened in Case 4. It is a question for future experience to decide as to what had best be done in such cases. Should the wound be closed and nothing further be done unless symptoms of stricture show themselves? This will probably mean that a secondary cysto-ureterotresis is impossible, and that nephrectomy is the only way out of the difficulty. Or should an immediate cysto-ureterotresis be performed in all cases where the stone has been impacted for two years or more? Very probably the kidney is of little value in such a case, so that it is a moot point as to whether the added risks of a cysto-ureterotresis are worth taking, and in all probability the patient will come out of his difficulties most surely if his ureter be left to take its chance, and if a secondary nephrectomy be proceeded to forthwith as soon as any sign arises of stricture of the ureter.

The Rationale of the Incision.

When incising the abdominal wall the surgeon should split muscles and their sheaths in the direction of their fibres, should turn muscle bellies aside, should cut no nerves, should leave intact the main vascular trunks, and should make an opening as small as is consistent with a proper display of the parts beneath.

In planning an incision to explore the pelvic ureter the following facts had to be considered: (1) the position and direction of the last dorsal and ilio-hypogastric nerves; (2) the position and course of the deep epigastric vessels and their relation to the transversalis fascia; (3) the arrangement and direction of the fibres of the rectus, oblique, and transversalis muscles. To determine these points I made special dissections of the abdominal wall in a number of subjects, and I must also acknowledge my indebtedness to a paper by V. P. Blair, of St. Louis, who dissected ten subjects and published his observations in 1905.[2]

Based on a number of dissections the following statements will be found to hold good in the average case. The twelfth dorsal nerve crosses the semilunar line and enters the sheath of the rectus halfway between the umbilicus and the pubis. The ilio-hypogastric nerve will be found in the substance of the internal oblique and then between that muscle and the external oblique about one finger's breadth above Poupart's ligament.

The deep epigastric vessels cut the edge of the rectus abdominis muscle one and a quarter inches—that is to say, rather less than two fingers' breadth—above Poupart's ligament. The vessels appear to bear a variable relation to the transversalis fascia, and may not pierce the fascia till just as they enter the rectus sheath itself.

As regards the arrangement and direction of fibres of these muscles. If an incision is made parallel to and two fingers' breadth above Poupart's ligament, the fibres of the external oblique aponeurosis are in the same direction as the incision or they run a little downwards and inwards with regard to it. They extend in the same direction over the edge of the rectus for nearly one inch before fusing with the deeper layer of the rectus sheath.

The fibres of the internal oblique and transversalis muscles and their aponeuroses are horizontal except in the external part of the wound, when those of the internal oblique tend to run upwards and inwards. These muscles can, therefore, be split together in a direction either horizontal or slightly upwards and inwards, and the split is then extended onwards on to the anterior layer of the rectus sheath for the distance of one inch.

The edge of the rectus muscle is drawn inwards to make more room. This method of incising the sheath of the rectus horizontally is a great advance on incisions such as Battle's incision, wherein the rectus sheath is cut vertically across the fibres of the sheath and the posterior part of the rectus sheath is also cut vertically across its fibres, the cut severing the twelfth dorsal nerve and its accompanying vessels. The posterior sheath of the rectus below the level of the incision is absent or is merely represented by the transversalis fascia.

As regards the size of the incision, experience of the cases detailed below has taught me that three inches is quite long enough for the average case (2½ inches in Case 8). In my early cases the incision was longer, and it may be necessary in exceptionally difficult cases to prolong the incision to four or even five inches by splitting the muscles in an outward direction. I lay special stress on the question of size, as, judging by the literature, I do not think it is yet recognised at all widely that so small an incision will suffice. The old-fashioned ilio-lumbar incision of great size should never be needed.

The relation of the right ureter to the vas and the visceral branches of the anterior divisions of the internal iliac vessels is very like that of a pen held in the right hand ready for writing. The pen represents the ureter, the thumb the vas deferens, the first finger the leash of vessels (superior vesical, uterine and inferior vesical) running forwards from the parent trunk along the side of the pelvis between the ureter and the wall of the pelvis and then round and over the ureter to enter the bladder and uterus.

Notes of Cases.

Subjoined is a list of 13 cases in which I have employed the incision in the last two years for operations on the pelvic ureter.

CASE 1.—Female, aged 31 years. January, 1911, eclampsia during parturition. Ever since pain in right loin, renal colic, hæmaturia, and pyuria. Examination showed B. coli and pus in large amount in the urine, albumin one-third. In skiagram an ovoid shadow was seen in the region of the right pelvic ureter. August 4th, 1911. operation, muscle-splitting incision as above. Stone found 1 in. outside bladder wall, pushed up into healthier part of the ureter, and removed. Rubber drain; no leakage; first intention wound. Patient left hospital on sixteenth day. Stone, phosphate of calcium and magnesium.

October, 1912: Urine clear, no pus; no block in right ureter as tested by a ureteric catheter; no stone shadow in the X ray. The patient came up for headache and œdema of the legs due to a fresh attack of non-microbic nephritis.

CASE 2.—Male, aged 22 years. August 13th, 1911; two attacks of renal colic during the last six months. A skiagram on each occasion showed a stone shadow in the right lower ureter in the same position. Urine, trace of albumin, red blood corpuscles, calcium oxalate crystals, no pus. August 13th, 1911, operation, incision as above, but nearly 5 in. long. The ureter was exposed and cleared right down to the bladder wall. Stone almost intramural. Ureter incised over stone, stone removed, and ureter stitched; drain. A little urine leaked for a few days. Patient left hospital on sixteenth day soundly healed. Stone, calcium oxalate. Urine at exit, no albumin, no pus.

CASE 3.—Male, aged 41 years. Eight months' history. Urine, trace of albumin, many red corpuscles, calcium oxalate crystals. Skiagram, stone shadow in left lower ureter. Oct. 16th, 1911, operation, incision as above, 3 in. long. Ureter opened 3 in. above the stone, and the stone removed easily with forceps. Wound in ureter reunited; small tube. No leakage; tube out second day; wound healed by first intention, and patient left hospital on sixteenth day. Urine, no pus, but still a trace of albumin. Stone, calcium oxalate and magnesium phosphate mixed.

CASE 4.—Male, aged 24 years. Nov. 1st, 1911; two years' history. Treated by a man who calls himself the "Human X Rays." Urine acid, pus in fair amount, albumin. Skiagram, very large ovoid shadow in the region of the left lower ureter, measuring ⅞ in. by ⅞ in. An "iron oxide" bougie was passed 3½ cm. up the left ureter and a stereoscopic X ray picture was taken. This showed the top of the bougie touching the stone shadow. "Œdema bullosum" of left ureter. Nov. 9th, 1911, operation, incision as above, 3 in. long. Ureter so dilated that at first it was mistaken for the sigmoid flexure; very adherent to the surrounding structures in the region of the stone; opened at the pelvic brim level, a large stone pushed up with a scoop, being very adherent to the sides of the ureter, and removed. The wound in the ureter was reunited; fine tube; no leakage. Healed by first intention.

Nov. 24th, 1911: Left renal colic, large tumour in left loin, fever. Cystoscopy, left ureter completely blocked. Left nephrotomy, drainage of a large collection of urine in the distended kidney under tension. Functional tests showed that the right kidney was good enough and left kidney almost functionless. Dec. 7th, 1911: Original wound opened up again. Ureter so buried in adhesions that it could not be isolated. Left lumbar nephrectomy performed. First intention wound. Kidney substance was thinner than notepaper. Patient left hospital quite well on Dec. 30th.

CASE 5.—Male, aged 38 years. March 23rd, 1912; since August eight attacks of right renal colic. Urine natural. Skiagram showed a stone shadow in the right lower ureter. March 25th, 1912, operation, 3-in. incision as above. Ureter exposed and opened at pelvic brim, stone extracted with forceps; rubber drain; no leakage. Wound healed by first intention and patient left hospital on nineteenth day.

CASE 6.—Female, aged 28 years. Sept. 3rd, 1912; ten months' history. The skiagram showed a stone shadow in the left lower ureter. Urine normal. Sept. 6th, 1912, operation, incision as above. Ureter exposed at pelvic brim and incised. Stone lying just above bladder; could not be pulled up with forceps, nor could it be pushed up by means of a finger in the vagina. Ureter cleared right down to bladder and again incised over stone; stone extracted. Both incisions in ureter united with a double layer of chromic gut. Wound re-united, with a small drain. First intention. No leakage of urine. Patient left hospital on eighteenth day, urine clear. Stone—calcium oxalate.

[2] Interstate Medical Journal, vol. xii., No. 8, 1905.

CASE 7.—Male, aged 59 years. Oct. 10th, 1912; ten months' history. Skiagram showed a stone shadow in the lower end of right ureter. Cystoscopy showed a large "middle lobe" prostate. Urine clear, no pus, no albumin. Oct. 24th, 1912, operation, incision as above. Ureter opened at pelvic brim. Stone lying 2¼ in. below the opening, easily extracted; ureter closed; rubber drain. No leakage of urine. Wound healed by first intention. Patient left hospital on the fourteenth day; urine clear at exit. Stone—calcium oxalate, trace of calcium phosphate.

CASE 8.—Male, aged 46 years; six months' history. Urine contained a fair amount of pus. Skiagram—stone shadow in the left kidney and another in the left lower ureter. March 4th, 1913, left pelvic ureter exposed as above. As the urine was purulent the ureter was clamped at the upper end and opened at the lower pelvic brim. Stone extracted with some difficulty by means of a scoop; was lying 3 in. below the opening. Wound reunited; indiarubber drain. Wound was 2½ in. long as measured at the end of the operation. First intention. Eight days later nephrolithotomy. Patient left hospital soundly healed four weeks from date of entry.

CASE 9.—Male, aged 43 years. Jan. 20th, 1913; 11 years' history. Urine clear, trace of albumin, calcium oxalate crystals. Skiagram—stone shadow in left pelvic ureter and another in the left renal cortex. Jan. 23rd, 1913, operation, incision as above; ureter opened at pelvic brim level. Stone lying 3 in. below opening, easily extracted. Ureter closed; rubber drain: no leakage of urine. First intention wound. Patient got up on thirteenth day, urine being clear. Stone—calcium oxalate. Feb. 13th, 1913, second operation. Left kidney exposed by muscle-splitting incision and stone extracted from the lower middle posterior calyx. No drainage; first intention wound. Patient allowed up on fourteenth day. Urine clear. Stone—calcium oxalate.

CASE 10.—Female, aged 23 years. Two years' history of pain, for which appendix had been removed by another surgeon. Skiagram—stone shadow in left lower ureter. April, 1913, operation. Left ureter exposed through 2½ in. incision. Much dilated; opened at pelvic brim, stone easily removed; wound in ureter reunited. No drainage; first intention. Patient up on ninth day. Stone—calcium oxalate.

CASE 11.—Male, aged 44 years. Oct. 7th, 1912; four years' history. Urine contained large amount of pus and tubercle bacilli. No radiographic evidence of tuberculosis in the kidneys. The right ureter could be felt per rectum to be thickened, evidence of infection of the right kidney, but not so the left ureter. Several attempts at cystoscopy and catheterisation of the ureters failed as the bladder was too irritable. Oct. 31st, 1912, operation, incision as above. Left ureter exposed in the pelvis and found to be adherent to the subperitoneal fat and definitely thickened. This proved that the left kidney was infected as well as the right, and that the case was inoperable. No drainage; first intention. Patient left hospital on twelfth day.

CASE 12.—Male, aged 21 years. August 9th, 1912. Diagnosis—right renal tuberculosis, left kidney healthy and of excellent functioning powers. August 16th, 1912, operation, Mayo's incision, right nephrectomy. Kidney and ureter stuffed with tubercle. A urinary fistula formed in the wound. Sept. 9th, 1912, second operation, incision as above, right ureterectomy to bladder wall. Ureter cut across with a cautery after it had been ligatured with stout catgut. Wound not drained; healed by first intention. Patient left hospital on Sept. 25th soundly healed.

CASE 13.—Male, aged 37 years. Four months' history; chronic phthisis. Cystoscopic diagnosis—tuberculosis of right kidney. No specimen could be obtained by catheterisation of left ureter. March 25th, 1913, operation. Left ureter exposed through 2½ in. incision; found to be not thickened. Right nephrectomy. Result two months later—no symptoms and urine free from pus.

Harley-street, W.

OBSERVATIONS ON "DIAGNOSTIC" TUBERCULIN.

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WITH the introduction of the tuberculin test it was hoped that much of the difficulty attending the recognition of pulmonary tuberculosis in the early stages would be removed, and that in a case presenting signs and symptoms suggestive of tuberculosis, but lacking the definite proof afforded by the presence of tubercle bacilli, the application of the tuberculin test would determine the existence or non-existence of the disease. This hope has not been fulfilled. Some clinicians, however, are still of the opinion that by the use of tuberculin in such cases a definite diagnosis can be arrived at. Those who hold this view believe that a general reaction—namely, a rise of temperature, malaise, &c.—to diagnostic doses of tuberculin is sufficient proof of the existence of what may be termed "clinical tuberculosis." If, in addition, there are signs or symptoms suggestive of pulmonary tuberculosis, a positive diagnosis, in their opinion, is justified.

This view unfortunately cannot be maintained. Franz in particular has shown that a very large proportion of apparently healthy men who present no signs or symptoms whatsoever of tuberculosis give a general reaction to diagnostic doses of tuberculin, especially so if the individuals thus examined came from a district in which tuberculosis is prevalent. Such cases Lawrason Brown, of the Adirondack Sanatorium, terms "non-clinical" tuberculosis. It is probable that in such cases there has been at some time an infection with tubercle; the infection, however, has never reached the stage at which it can be diagnosed clinically, is in many cases probably obsolete, and requires nothing in the way of active treatment.

It may be said with confidence that in healthy persons the tuberculin reaction is of no clinical significance, and that in a case of ill-health a reaction to tuberculin is, in itself, no evidence that tuberculosis is the cause of the symptoms. In brief, it is generally recognised that so far as pulmonary tuberculosis is concerned tuberculin for diagnostic purposes has great limitations, since a reaction occurs as readily in cases of mere infection with tuberculosis (non-clinical tuberculosis) as in clinical tuberculosis, and in respect to clinical tuberculosis we are unable to differentiate with any certainty by the use of tuberculin between cases of active, quiescent, and arrested disease. There are, however, good grounds for holding that in the case of a patient presenting indefinite signs and symptoms the failure to react to a subcutaneous dose of 10 milligrammes is strong evidence against the existence of clinical tuberculosis, and that conversely the occurrence of a focal reaction in a suspected area in the lungs is suggestive of the existence of potentially active tubercular disease.

The above represents very briefly the state of our knowledge of the value of tuberculin as a means of diagnosis at the date of the commencement of our work on tuberculin. Since that date (October, 1911) every patient at the sanatorium in whom we have failed to find tubercle bacilli has been subjected to the subcutaneous tuberculin test. In this report I propose to record the results of these observations, and to indicate to what extent we have been influenced by them in the diagnosis and treatment of these particular cases. The number of patients thus observed up to March 31st amounted to 50.

Method of observation.—The patient (afebrile patients only are tested) is kept at physiological rest for some 48 hours before the inoculations are begun, the temperature being recorded three-hourly throughout this period and during the whole period of subsequent observations.

Dosage.—The sequence of doses used is as follows: First dose, 2/10 milligramme (0·0002 c.c.) albumose-free tuberculin; second dose, 1 milligramme (0·001 c.c.); third doses 5 milligrammes (0·005 c.c.); fourth dose, 10 milligramme, (0·01 c.c.).

Site and time of inoculations.—The inoculations are made at 10 A.M., usually in the forearm.

Clinical record.—Note is made daily as to the presence of (*a*) local reaction at the seat of inoculation; (*b*) general reaction—namely, rise of temperature, malaise, &c.; also of any increase of symptoms, such as cough, sputum, &c.; and (*c*) focal reaction—namely, the appearance of, or increase in, physical signs or increase of sputum. Sputum, when available, is carefully tested for tubercle bacilli by the sedimentation method of Ellerman and Erlandson. The 50 cases now under consideration may be for convenience divided in two groups: (1) those in which there were physical signs suggesting the possibility of tuberculosis either in the lung, larynx, or pleura (37 in number); and (2) those in which no physical signs were present (13 in number). It may be assumed that all the 50 cases had something suspicious in their clinical history, symptoms, &c., inasmuch as they had been sent into the sanatorium as cases of pulmonary tuberculosis. The results of the diagnostic tests are summarised in the following table:—

—	Cases with suspicious physical signs.	Cases with no suspicious physical signs.	Total.	Per cent. of all cases.
Gave no reaction	8	3	11	22
Gave a focal reaction ...	12	1	13	26
Gave a general reaction only	17	9	26	52

Indications given by the above Results.

Focal reactions.—The 13 patients who gave a focal reaction were regarded as suffering from tuberculosis in an active or

potentially active condition. These patients were all retained in the sanatorium.

Negative reactions.—The 11 patients who failed to react to tuberculin were discharged as at least not requiring active treatment in the sanatorium. The 3 patients who had doubtful physical signs were probably cases of non-clinical infection. Of the other 8 patients, some were possibly cases of obsolete disease. In none of these cases was there an association of a clinical history and physical signs strongly suggesting pulmonary tuberculosis. In such a contingency, one that has not yet occurred, we should retain and treat the patient, despite a negative reaction. In 24 cases, therefore, out of 50, the test gave us information of material value, inasmuch as we were enabled by it to determine that 13 patients certainly required active treatment, and that 11 patients had no occasion to remain longer at the sanatorium.

General reactions only.—In the 26 cases which gave a general reaction, but no focal reaction, the indications were much less definite. As previously stated, the occurrence of a general reaction in itself means no more than that infection with tubercle has taken place at some time. It seems probable that the absence of any focal reaction in such cases, in spite often of very considerable general reaction, gives us positive information of some value. To judge by our experience gained by treating a large number of definitely tuberculous patients with tuberculin a very slight and transient reaction—e.g., a rise of temperature of less than 1° F.—is very commonly sufficient to increase slightly the amount of sputum for a day when the lesion is active or has been recently active. In such cases, too, an unmistakable focal reaction is, as a rule, very readily produced, and is nearly invariably associated with an increase in the amount of sputum. The absence of any focal reaction or increase of, or appearance of, sputum would seem to be at least suggestive that a tuberculous focus, if existing, is quiescent or obsolete, the indication as to treatment being a careful life rather than anything of a more active character. We have not sufficient experience as yet on which to form any opinion as to how frequently tuberculin in diagnostic doses may fail to produce a focal reaction in cases of active or recently active disease. Again, it is quite conceivable that a focal reaction occurring in a deep-seated lesion may escape detection on physical examination. In some cases, for instance, I have thought that pronounced pleural disease may have masked the physical signs of a focal reaction in the underlying lung. With these various possibilities in mind, we judged each of the 26 cases which gave only a general reaction on its clinical merits, and, from a consideration of the history, symptoms, physical signs, &c, determined what to us appeared to be the most probable diagnosis. Twelve cases, the most suspicious ones, were treated in the sanatorium for an average period of 12 weeks. Ten cases were treated in the sanatorium for an average period of seven weeks, 3 were discharged after four weeks' observation, and the remaining patient, who was found to be suffering from malignant disease, was discharged as soon as the diagnosis was established.

The practical value of the subcutaneous tuberculin test.—It is impossible to speak with confidence on this point, as we have no means of ascertaining whether the inferences we drew from our series of observations were correct or incorrect. The subsequent after-histories of the cases will, however, give us a very fair answer to the question. Assuming that our judgment has, in the main, been sound, we have been able to form a positive opinion in 48 per cent. of doubtful cases. In the other 52 per cent. we obtained information of a negative character, and had to rely for our diagnosis upon a careful review of all the available clinical data. Our experience, in short, so far, would suggest that tuberculin is of distinct service for diagnostic purposes.

Some Notes as to the Various Reactions.

The focal reaction.—It is to be noted that the 13 cases which gave a focal reaction reacted in all but one case to a dose less than the maximum, the actual doses being as follows:—0·001, 0·0003, 0·001, 0·005, 0·001, 0·005, 0·01, 0·0002, 0·005, 0·001, 0·005, 0·005, 0·005 c.c. This supports the view that 0·01 c.c. (10 milligrammes) is an adequate maximum diagnostic dose. In 4 cases a focal reaction occurred comparatively early in the course of the test, and was not associated with any rise of temperature or other evidence of a general reaction. There being, therefore, no relation between the intensity of a general reaction and the production of a focal reaction, it is important that a careful clinical examination should be made every day, irrespective of the occurrence of a general reaction. It is clearly undesirable to continue to give tuberculin when a focal reaction has been produced.

The general reaction.—The degree of fever during a general reaction varies very much; in our 50 cases from a minimum of 99·6° F. to a maximum of 104·2°. A temperature between 101° and 102° represents an average reaction. In 25·7 per cent. of those cases a general reaction and a focal reaction were associated.

The relation of these two reactions in 50 cases is shown by the following analysis: Focal reaction with general reaction, 18 per cent.; focal reaction alone, 8 per cent.; general reaction alone, 52 per cent.; no reaction, 22 per cent. Otten, quoted by Riviere and Morland, gives the following figures for a similar analysis of 324 cases: Focal reaction with general reaction, 60·8 per cent.; focal reaction alone, 7·4 per cent.; general reaction alone, 23·5 per cent.; no reaction, 8·3 per cent. Lawrason Brown obtained a focal reaction in some 33 per cent. of 268 cases examined. Bandelier and Roepke, who have had great experience, state that a focal reaction is obtained in one-third of all cases. These figures may be thus compared:—Gave a focal reaction: Otten, 68·2 per cent.; Lawrason Brown, 33 per cent.; Bandelier and Roepke, 33 per cent.; our cases, 26 per cent.

The discrepancy between these sets of figures is noticeable. Our experience is as yet small, but so far as it goes it approximates much more nearly to that of Brown and Bandelier and Roepke than to that of Otten. The figures of these last-named observers are, however, comparable. I think we may assume with a great degree of probability that the wide difference between the experience of Otten and that of Brown and Bandelier and his colleague is due to a varying conception of what constitutes a focal reaction. If the development, or increase, of symptoms referable to the respiratory system, without any increase in physical signs or increase of sputum, is accepted as sufficient evidence of a focal reaction, the proportion of positive focal reactions obtained in a series of cases will be high. In practice, however, it is very difficult to distinguish such symptoms which may possibly represent the focal reaction from those which are the outcome solely of the high fever and constitutional disturbance resulting from the general reaction. In this difficulty lies great scope for fallacy, and for differences of opinion and results.

The appearance of tubercle bacilli in the sputum during a reaction.—In two of our cases tubercle bacilli were found in the sputum during a reaction, though repeated examinations previously had given a negative result. In one of these cases there was no obvious focal reaction and no increase of sputum. In both cases the tubercle bacilli disappeared again from the sputum when the reaction passed off, and in neither case have they as yet been found again. Such an appearance of tubercle bacilli during a reaction is, according to Lawrason Brown, so exceptional, only occurring in his experience in 6 per cent. of 286 cases, that he is of opinion that when it occurs the apparent connexion is merely a coincidence. Bandelier expresses a very similar view. Personally, I cannot think that the appearance of tubercle bacilli in our two cases was simply a coincidence. It would seem more probable that it was the result of the hyperæmia set up in the diseased areas by the reaction. A very comparable experience seems to favour this view. We have on several occasions observed the reappearance of tubercle bacilli in the sputum during the course of an inter-current catarrh. This we attributed to a transient hyperæmia of the quiescent focus of disease resulting from the catarrh. In these cases, also, the tubercle bacilli disappeared again when the catarrh subsided.

The safety of subcutaneous diagnostic inoculations.—As yet we have seen no ill-effects of the result of diagnostic inoculations. The reaction is often very unpleasant to the patient when at its height, but the signs and symptoms produced, whether general or focal, are very transient, and usually pass off completely in from 24 to 48 hours.

The effect of the introduction of the tuberculin test upon the administration of the sanatorium.—As may readily be expected, the use of "diagnostic tuberculin" is reflected in

the work of the sanatorium. A certain number of negative cases are discharged after some four weeks' observation, and a somewhat larger proportion of more suspicious cases are retained for some eight to ten weeks only, instead of the usual average of 16 weeks or more. The effect of this is to increase the proportion of patients in the sanatorium who have unmistakable evidence of pulmonary tuberculosis—namely, tubercle bacilli in the sputum.

Midhurst, Sussex.

THE SIGNIFICANCE OF RENAL TUBE CASTS IN THE URINARY SEDIMENT.[1]

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FOR close upon ten years I have been accustomed to consider no routine examination of the urine complete without microscopical investigation of the centrifuged deposit, and realising that useful information might subsequently be derived, the results of examination have been carefully noted in a book specially tabulated for the purpose. Observations of this kind taken by the man engaged in general practice have this merit, that they are not, as a rule, limited to one observation of the patient, but may often be repeated at intervals stretched over a considerable number of years There is thus at his disposal which the consultant must of necessity lack—viz., a constant means of testing the prognostic value of any given sign or symptom.

With regard to the subject of this communication much has been written, and much difference of opinion expressed as to the interpretation which should be given to the presence of renal tube casts in the urine of those in whom there is no other evidence of renal disease, whilst in the case of an established nephritis no one disputes the pathological import of their presence. Here, however, the teaching of the older text-books on medicine has nowadays to be modified, for Sahli, in his fourth edition of "Diagnostic Methods,"[2] says as follows: "Little can be claimed for the diagnostic importance of the different varieties of casts—granular and waxy (as opposed to hyaline and epithelial) were formerly supposed to indicate a chronic process; but the idea was wrong. Any and all varieties of casts may be found in every type of nephritis, and even an amyloid kidney does not produce any distinctive type of cast." I would emphasize the words *any and all varieties of casts may be found*, for so frequently one has heard it laid down that the hyaline cast is a matter of small consequence in the deposit. Napoleon Boston, who has written extensively on urinary analysis, is in agreement with Leube and Purdy, who state that urine containing hyaline casts either contains albumin or has recently contained it, even though in small amounts. Saundby,[3] writing at a time when the centrifuge was coming more into general use, considered that the findings of that machine were such as to cause unnecessary misgivings, and he sounded a warning note as to attaching too much importance to reports on urinary analyses conducted in research laboratories where the centrifuge was in routine use. The article was published at a time when I had not the data by which to support or refute the statement, but during the nine years which have followed the constant examination of the deposit brings out, at any rate from my own researches, two salient facts: 1. The large number of cases (74 out of 134) in which, when the presence of casts was first noted, the urine failed to react to the routine tests for albumin. 2. Whilst the majority of these cases were examined in a condition of temporary or permanent morbidity, it is nevertheless impossible from their subsequent behaviour to dissociate the presence of casts from the particular affection in question.

In support of these statements I propose to analyse briefly the 74 cases, the urine of whom when first examined was found to contain casts but failed to give the reaction for albumin. Of these there are—

Still living—	(*a*) Health fair; no albumin	29
	(*b*) Health indifferent (2 give tests for albumin)	22
No information		11
Died		12

Of the 29 cases in division (*a*), of those still living and whose health we can presume to be in fair although in the majority in by no means sound health, there were of—

Acute fever (typhoid 2, glandular fever, pneumonia 2) ...	5 cases
Cyclical vomiting with acetonæmia	1 case
Arterio-sclerosis (7 aged 70 and upwards)	10 cases
Examined for life insurance	1 case
Renal calculus	4 cases
Floating kidney	2 ,,
Furunculosis	2 ,,
Appendicitis (chronic and subsequently operated upon) ...	1 case
Oxaluria	1 ,,
Specific myocarditis	1 ,,
Fatty heart	1 ,,

The acute cases call for little comment, the casts appearing at an early stage of the illness, and doubtless symptomatic of cloudy swelling in the kidney. In the case of cyclical vomiting (child aged 4) the casts were of the hyaline variety, and disappeared with the fall of the temperature and cessation of vomiting. The ferric chloride test was positive. The arterio-sclerotic cases will be considered later. Four cases are for convenience classified as renal calculus, but were not all verified by X ray or operation. The symptoms present, however, pointed strongly, if not to the presence of an actual stone, at least to collections of crystals extensive enough to produce colic. Hyaline casts have been particularly noted in a sediment rich in crystals of calcium oxalate, and have disappeared *pari passu* with the latter. Casts were noted in two cases of floating kidney in this series. In addition the sediment in one case showed abundant epithelial cells of renal type. At the operation undertaken for replacement and fixation a large hæmatoma was found beneath the true capsule. Microscopical evidence of renal irritation has been my experience in a majority of these cases, and brings me to advise a belt or operation for replacement wherever I find a genuine movable kidney.

The two patients suffering from boils were both men over 40 years of age; their urine contained a few hyaline casts and cylindroids. Possibly these are gouty men whose kidneys are beginning to show wear and tear from elimination of an excess of waste products. The case of appendicitis refers to a man aged 46, who was in a state of general ill-health owing to a chronic inflammatory condition with adhesions. Operation restored him to fair health, but I have since had no opportunity of testing his urine. The two remaining cases consulted me for cardiac conditions: the first with symptoms of arrhythmia gave a history of syphilis; the second, a stout middle-aged lady, suffered also from "irregular gout."

Class (*b*) Health indifferent:—

Valvular cardiac disease	5 cases	
Arterio-sclerosis	5 ,,	(3 over 70 years).
Glycosuria or diabetes (true)	2 ,,	
Graves's disease	1 case	
Renal colic	1 ,,	
Sciatica	1 ,,	
Old nephritis	1 ,,	
Asthma	1 ,,	
Cardiac (non-valvular)	4 cases	
Gout	1 case	

In this series two of the cases occasionally show a trace of albumin.

The five cases of cardiac valvular disease were patients of middle or advanced age, and the majority showed evidence of arterial degeneration. No one of them showed signs of backward pressure, and possibly in some of them the cast association was primarily in the kidney. Of those labelled arterio-sclerosis three out of five had passed their seventieth year. The remaining two were aged 62 and 69 respectively,

[1] A paper read before the Devon and Exeter Medico-Chirurgical Society on April 11th, 1913.
[2] Translated by Kinnicutt and Potter.
[3] Medical Annual, 1904.

but had been under observation for several years. These two cases are worthy of closer scrutiny.

A B, aged 62, had consulted me some five years ago for symptoms of neurasthenia and I then noted a + tension pulse together with the presence of granular and hyaline casts in the urine. I saw him no more professionally until this year when he was convalescing from a serious cardiac breakdown. A mild attack of scarlet fever in June, 1912, had doubtless been sufficient to leave the myocardium temporarily unequal to the strain imposed upon it by the high arterial resistance.

C D, a spinster, aged 69, has been known to me for nearly ten years, and the earliest examination of urine showed the presence of hyaline casts. At the present time both granular and hyaline varieties are noted. The blood pressure in this case was noted + normal in 1906, and two years ago was found to be 190 by an accurate instrument. An aortic systolic murmur was noted when I first saw her, and at the time of writing there is grave threatening of cardiac breakdown. Albumin has been latterly found in the urine on one or two occasions, but the most ominous sign is the fall of the blood pressure to 140.

The aortic systolic murmur was not associated with thrill or slow pulse, and the text-books lead us to attach little importance unless this chain of physical signs is complete, but instances I have known and followed over a considerable number of years are too numerous to be mere exceptions to a rule, and one finds increasing reason for considering these cases seriously.

Glycosuria is responsible for two cases in this series and, indeed, more than 90 per cent. of the examinations conducted for this paper show the presence of casts and sugar coincident in the urine. The late Dr. F. W. Pavy[4] drew attention to this frequency and considered that direct irritation of the kidney was set up by the excretion of sugar. Dr. Pavy found that if the glycosuria was arrested casts frequently disappeared.

The case of Graves's disease related to a man aged 62, with thickened arteries, and whose urine occasionally reacted with Fehling's solution. Plentiful hyaline and granular casts were noted in the deposit. The case of renal colic constantly excretes large quantities of uric acid crystals, and these have been noted frequently in the patient with sciatica, but with her casts were noted some five or six years ago, when aged 43, and were of the hyaline variety. Granular and hyaline were both present when the urine was examined in July last, some five years after the first note was made. There would seem to be more here than mere irritation by crystals.

A case of "old nephritis" in a female, aged 54 years (the history of the previous health points to a severe attack of acute nephritis in 1909), is mentioned here, as at the present moment there is no obvious albuminuria, the specific gravity is not abnormally low, and unless the deposit is examined with the microscope there is nothing to draw attention to the renal condition—an important case from the point of view of life insurance. The remaining cases are with one exception elderly people with cardiac irregularity but no definite evidence of valvular lesions. The exception is a woman, aged 54, whose arterial tension is much raised and who has had more than one attack of an angina nature. The asthmatic is a man aged 74 and shows signs of failing right heart.

Dead (12 cases):—

Glycosuria or true diabetes	4
Arterio-sclerosis	4
Post-operation gall-stones...	1
Chronic alcoholism	1
Valvular heart disease...	1
Calculus	1

Here, again, the association of tube casts and glycosuria is to be noted. Arterio-sclerosis also accounts for four cases in this series, of whom two were aged 70 and upwards. Of the remaining two, one was an officer, aged 64, whose health I had observed for about two and a half years. He was another example of advancing life with + blood pressure, an aortic systolic murmur (unaocompanied by thrill or slow pulse). The urine when first examined contained hyaline casts, but granular were constantly noted also some six months before his death. Previous to his last illness he had enjoyed good health with the exception of two attacks of renal colic, during one of which I attended him. I first, however, attended him for a trivial complaint, and noted the casts at some distance of time from an attack of colic. The final breakdown was apparently cardiac and renal combined, and was hurried on by prostate irritation. The patient literally broke down in bed.

The alcoholic case does not call for comment, and the "valvular heart" refers to an affection of the mitral valve in a man, aged 62. The heart was known to have been damaged in an attack of acute rheumatism 40 years previously. Plentiful granular and hyaline casts were found in the urine long before there was any evidence of backward pressure elsewhere. In this case the blood pressure was high and was no doubt largely responsible for the final breakdown. The heart had permitted the patient (a distinguished officer) to indulge freely in sport until within a very few years of his decease. and he had actually bowled for his regiment at the age of 50.

Analysis of the remaining 60 cases, where the urine was found to contain albumin at the first testing, hardly comes within the range of this investigation. Albuminuria (except perhaps the adolescent transient form) invariably influences the prognosis in any given case, and the association of casts with albumin would evoke further caution from the majority of physicians. Yet many of these cases are of no more gravity (if indeed as much) than those where casts only are found in the urine. We are trained to seek diligently for the presence of albumin, and failure to find this substance frequently gives the kidney a certificate of health which I venture to think might rightly have been modified if five minutes' further work had been devoted to the centrifuge and microscope.

Nor must too much importance be attached to the reading of the specific gravity. Consulting-room samples have little value in this respect, and I frequently find −1010 in the urine of people above suspicion as regards renal disease, whilst conversely plentiful granular and hyaline casts may be noted in the albumin-free urine of an arterio-sclerotic patient a short period of time before the final breakdown. A case of this kind is fresh in my memory—a retired clergyman, aged 76, with thickened arteries and a blood pressure of 180 on an average. Beyond attacks of paroxysmal dyspnœa he was able to enjoy life, and in consequence he was often tempted to overtax his physical staying power. Two years ago the urine, of specific gravity 1017, was found to contain numerous granular and hyaline casts, although albumin was absent. The cardiac apex was in the mid-clavicular line and the first sound suggestive of hypertrophy at concert pitch, but otherwise one found no fault. He had an attack of influenza in the spring of 1912 and weathered the pulmonary complication remarkably well. Several months later the dyspnœa tended to become more constant and more urgent in character, and œdema of the legs, always present to a slight extent, increased rapidly. Rest in bed failed to relieve either the dyspnœa or œdema, and in addition the mind wandered. He died in an uræmic condition three weeks from the first notification of albumin, and this was never more than 0·08 per cent. of Esbach's scale. The pulse remained good almost to the end.

I suppose that no subject attracts the attention of the physician nowadays more than that of arterio-sclerosis, and it rightly deserves this attention, for the condition is relatively common, and when once established we are lamentably impotent to arrest its progress. Any hope would appear to be derived from battling against its precursors, and if we accept Sir Clifford Allbutt the first link in the chain is forged by impurities in the blood, and thereby "increase in the so-called viscosity." By rigid attention to the elimination of waste products, and, better still, avoidance of their accumulation, Sir Clifford Allbutt points out a possible means of arresting the mischief at the first indication.

I am so accustomed to note the presence of casts in the urine of patients aged 50 and upwards with no further criticism to make than a high blood pressure that I think it would be well to order them a diet calculated to allow the minimum of waste production and exercise regulated so as to allow a fair margin for cardiac compensation in view of the increasing arterial resistance. In men golf seems to answer this purposes provided the links are moderately level, but each case must, of course, be adjudicated on its own merits.

Dr. J. Mitchell Bruce[5] has shown the risks of bicycling in cardio-vascular derangements, and I have already cited one case where a breakdown was undoubtedly referable to this form of exercise. A second is that also of a clergyman

[4] THE LANCET, Dec. 5th, 1903, p. 1575.

[5] Lumleian Lectures, THE LANCET, July 15th, 1911, pp. 144 and 145.

who took up bicycling at the age of 50. Some seven years ago, when aged 60, he consulted me about his urine, as diabetes was a family disease. I could detect no sugar, but found the specific gravity high and the deposit to contain granular and hyaline casts. The heart sounds were normal. Last year I again saw him, but this time for a slight fainting attack when officiating in church; it was at the beginning of service, and he had almost run the distance of 300 yards from his house to the church. There was now a loud systolic murmur replacing the first sound at the apex, which was located in the mid-clavicular line. There was no œdema and no albumin, but the urine showed the presence of plentiful casts. His life has now been remodelled in many respects, and his condition improved in consequence.

The term "de senectute" is now proscribed by the registrar-general, and the obituary list of any morning paper points at any rate to a need for correction of the Psalmist's figures for present-day needs. A man is as old as his arteries, and old age is in the majority of cases but an expression of the extreme limit of what was dignified in earlier years by the title arterio-sclerosis. I have frequent opportunity for the investigation of the urine of those of advanced years (+75), and casts, hyaline, or granular and hyaline, are as frequently noted. That they are present probably in the majority of those aged 70 and upwards is no reason why they should be regarded as non-pathological. They are, on the contrary, evidence of renal changes consequent upon backward pressure or arterial thickening, whether we are content with the definition old age or not, and although we are forced, in the present light of our knowledge, into accepting the processes of decay without murmuring. It is not so, however, with the man, aged 50 to 55, and the finding of casts should be regarded as evidence of undue wear and tear, and as a distinct, if the only, warning—"the cloud no bigger than a man's hand"—that announces the coming storm.

Including the cases with albuminuria, 12 patients with diabetes or glycosuria appear in my notebook. Of these, no less than 11 showed casts in the urine. In respect of treatment it is extremely difficult to protect the kidney. In the composite forms it is often quite impossible to keep the output of sugar below 2 or 3 per cent, and the kidney must eventually suffer. In the alimentary form Pavy[6] tells us that the casts and albumin will often disappear when the diet is restricted. At any rate, casts should be sought for if only as an element in the prognosis.

With regard to the varieties of casts found in the urine, I think that much confusion exists owing to the fact that no strict line of demarcation exists between them if we except the epithelial and blood forms. Some would define as hyaline the cast that another would classify as finely granular, and the personal equation enters here, as it so often does in the estimation of leucocytes in blood examinations. The exact distinction between fatty and granular is hard to define, and lardaceous is a term of the past. Granting the distinctions, we are still ignorant of why some casts are granular, some hyaline, and others fatty. My own observations have brought me to think that the hyaline cast when found unaccompanied is an indicator that the kidney is still active as an organ of filtration, whereas some stagnation is necessary for the appearance noted in the granular and fatty forms. The actual composition of the granules seems also to be a subject upon which there has been no settled agreement.

In conclusion, I should like to advocate the more general use of the centrifuge. Apart from cast-finding, many a diagnosis can be clinched in five minutes in comparison with 24 hours with the conical glass, to say nothing of the urine being stale and unreliable with the latter alternative. Only a few weeks ago I found much difficulty in the diagnosis of a case where symptoms, including a rigid right rectus, did equally well for renal colic or appendicitis. The centrifuge and microscope at once decided the question, a few blood cells and hyaline casts and plentiful crystals of oxalate of calcium being found on the slide. Macroscopically the urine could have passed muster on the first examination.

In life insurance examinations microscopical investigation of the centrifuged deposit should be a *sine quâ non*, and the case further investigated if casts should be found.

Once more I would like to emphasise the importance of searching the urinary sediment of middle-aged people with a raised blood pressure for the presence of casts, which, if present, may be the only warning that the machinery will give way unless the load is speedily lightened. Falstaff is generally represented to us as a man who might have been full to the brim with waste products and of high arterial tension, yet the page answers thus to his query, "What says the doctor to my water?" "He said, Sir, the water itself was a good healthy water: but, for the party that owed it, he might have more diseases than he knew for."[7] If the doctor of Shakespeare's time had had the advantage of a centrifuge and a microscope, I fancy that the opinion would have been somewhat modified in respect of that sample.

Exmouth.

[6] Loc. cit.

[7] King Henry IV., Part II., Act i., Scene 2.

THE COLLOIDS OF IRON.

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THAT iron in one or other of its colloid forms will ultimately play an important part in the therapy of anæmia and allied conditions, more especially by administration by the hypodermic route, prompts me to give a short account of some experiences of the therapeutic employment of certain colloid solutions or sols of this element.

Those who have used the liquor ferri dialysatus of the old Pharmacopœia can have but little doubt as to its very great value in the treatment of chlorosis and certain secondary anæmias, more especially those cases that were unable to tolerate other preparations of iron. The liquor ferri dialysatus prepared according to the Pharmacopœial directions consists of a colloid peroxide of iron, and is in many ways a most remarkable preparation. The disperse phase of this sol is electro-positive, its particles or meres passing to the kathode when a current of electricity is passed through it; precipitation, in consequence, at once takes place when colloids whose disperse phase is negative are added, such as the metallic colloids, colloid silicic acid, and the electro-negative colloids of the blood serum. This precipitation, or rather gelatinisation, is to a certain extent reversible, and the addition of water will redissolve the coagulum, in contradistinction to the coagulum of colloid silicic acid, in which case no amount of water will bring about re-solution.

The search for an organic protective colloid which would prevent or minimise this tendency of the sol to gelatinise failed to yield this happy result, due, no doubt, to the fact that the disperse phase of the majority of the organic colloids tried possessed an opposite electric sign to that of the positively charged particles of the peroxide sol. Consequently it was hardly to be expected that the colloids which efficiently protected the metallic sols of same electric sign would do so in the case of a colloid of opposite sign. Glycerine, however, in the small amount of 1 per cent., undoubtedly preserves this preparation and prevents the formation of a bulky jelly in the presence of the electrolytes and oppositely charged colloids of the blood serum.

My first attempts to employ this colloid hypodermically were with sols made in one of the following two ways. In the first a 30 per cent. solution of ferric chloride is added to a measured amount of boiling distilled water, the sol which forms being freed from free hydrochloric acid by dialysis. In the second the hydrate of iron precipitated from ferric chloride by ammonia is redissolved in hot chloride of iron solution and the free acid removed by dialysis for ten days in running water. The sol so obtained is standardised by means of a colorimeter, so as to be equal to one-quarter the strength of the liquor ferri dialysatus of the old Pharmacopœia. This peroxide sol, rendered somewhat more stable by the addition of 1 per cent. of pure glycerine, can be employed hypodermically without untoward result of any sort.

After using it a considerable number of times in different cases of deficient blood conditions, none of the patients so treated complained that the injection was in any way accompanied by pain, at any rate, no more painful than ordinary hypodermic injections of morphine or strychnine, which for different reasons several of the patients undergoing this treatment required. The slight swelling which comes on

in 24 hours, after the injection has quite disappeared, and the only sign that such an injection has been administered, is the pale bluish subcuticular hue of the skin for about half an inch around the puncture, and it disappears after two or three days. Following hypodermic administration, with, of course, similar precautions to those taken in intramuscular injections, in order to avoid puncture of a vein there seems to be little doubt but that the electrolytes and negative colloids of the lymph lead to the formation of a gel, which, however, is rapidly within 24 hours absorbed.

Though this positive hydroxide sol can be employed hypodermically, the fact that no agent has yet been discovered which would completely protect it from the gelatinising effect of the electrolytes and negative colloids of the blood serum, and consequently that the intravenous injection might possibly lead to embolism, has led observers to investigate whether a negative hydroxide sol of iron could be prepared or not. H. W. Fischer[1] has prepared a negative iron hydroxide sol by adding soda lye to a solution of chloride of iron, the glycerine of the lye protecting the colloid. The glycerine and excess of alkali are got rid of by prolonged dialysis running water for 10 days. Instead of glycerine protecting colloid can be used the hexatomic alcohols, mannite or erythrite, or the disaccharide sucrose. This sol when administered intravenously to dogs causes no embolism, and electrolytes in low concentration cause no gelatinisation, as is the case when they are added to the positive hydroxide sol. The sol is standardised colorimetrically by means of a Laurent colorimeter, so as to equal one-quarter the strength of the Pharmacopœial liquor ferri dialysatus; hypodermic doses of 1–2 c.c. cause no pain or swelling, and the slight bluish discolouration of the skin for a few millimetres around the puncture passes away in from 36 to 48 hours. I have used this negative sol for some time past in the hypodermic treatment of different diseases associated with extreme anæmia, and have seen no ill-effects therefrom. That benefit follows the hypodermic administration of these colloids in different varieties of anæmia is evidenced by the rapid clinical improvement as well as increase in the number of red corpuscles and also the percentage of hæmoglobin.

A point of interest which I hope to be able in the future to investigate further is the increased percentage of iron in the dried fæces following this treatment and under similar dietetic conditions, which points to the excretion into the alimentary canal of some of the iron so administered. In the majority of the cases in which these colloids have been administered the use of the ordinary iron preparations orally was contraindicated for one reason or another.

A case of extreme chlorosis in a girl who had been treated for long periods with the inorganic preparations of iron with but slight benefit rapidly improved under these injections, and the corpuscular content of the blood increased from 3,200,000 to 4,150,000 per c.mm. whilst the hæmoglobin increased from 40 to 62 per cent. within a month. In many other cases of both simple and secondary anæmia the degree of improvement could generally be noted by the increase in the corpuscle and hæmoglobin content of the blood, as well as by the marked improvement in the clinical condition of the patients. One case of extreme debility and anæmia following malignant secondary syphilis showed marked improvement of the blood conditions following alternate injections of the colloid hydroxide and Merck's colloid mercury. Another interesting property of the positive iron hydroxide is the fact first noted by R. Bunsen[2] that arsenious acid is taken up by the colloid. Biltz[3] has shown that this is a typical adsorption phenomenon, and recommended the use of fresh iron hydroxide sol as a useful antidote to arsenic poisoning.

In addition to the positive and negative colloid hydroxides of iron, a metallic colloid of iron or iron-sol can be prepared either by the dispersion of the iron by means of an electric arc formed just under distilled water by two stout iron wires and a current of from 6 to 7 ampères, or by various chemical methods, the general principle of which is the reduction of iron from dilute solutions of certain of its salts by various reducing reagents. The instability of sols so prepared renders it necessary to use one or other reversible organic colloid in order to prevent the more or less rapid precipitation of the disperse phase which takes place in unprotected sols, more especially in the presence of electrolytes. The sols of metallic iron so prepared and protected can be administered hypodermically with impunity, and judging from the results I have already seen follow their regular administration I venture to predict that they will take an important place in the future treatment of deficient blood conditions.

A protected colloid of iron prepared for me at the Crookes Laboratories at the instance of Messrs. Oppenheimers is an ideal protected iron-sol, and is a clear sherry-coloured liquid with a distinct aromatic odour, which is not precipitated by the electrolyte sodium chloride up to 5 per cent. This collo-sol of iron can be evaporated to dryness and again taken up with water. The distinct odour of burning nitrogenous matter which is noticeable during the process indicates that the disperse phase is protected by an albuminous reversible colloid.

The metallic sols of iron are definitely antiseptic; of course, not so markedly so as the metal sols of silver and mercury. The collo-sol of iron undiluted killed within six minutes such organisms as bacillus typhosus, bacillus coli communis, and various pyogenic cocci. The sols likewise seem to have a definite elective bactericidal action upon such catarrh-causing organisms as the pneumococcus and various strains of the micrococcus catarrhalis. I have frequently noticed the rapid relief and clearing up of symptoms following the topical application of the sol in cases of catarrh of the nose, larynx, or pharynx. In addition, its hypodermic administration in such cases, as well as more generalised catarrhal conditions as influenza, &c., certainly seems to be followed by benefit.

It is possible that the very slight astringent power of these sols is partly responsible for the beneficial results following their use in cases of catarrh. The hypodermic administration of a metallic iron-sol causes no pain, and when undiluted even; the only sign of the injection 24 hr[s] is the slight ecchymosis of the skin for a few [mm] around the puncture, evidently due to the hæmat[olysis] of a non-isotonic solution. The addition of an [equal] a 1·8 per cent. saline solution, so giving an is[otonic] of the sol, prevents this ecchymosis, but in [practice] so slight and so quickly passes away [that] hardly necessary. The doses which I hav[e found] useful have been from 0·5 to 2 c.c. of a [normal] and when administered hypodermically, or by [intramuscular] injection in cases of chlorosis, extreme [secondary] anæmia following such conditions as pneumo[nia], specific disease, surgical tuberculosis, &c., it is [found] in addition to evident benefit and improvement of [the] symptoms, marked increase of the hæmoglobin [and] blood corpuscles. In cases of erysipelas, cellulitis, &c., [the] iron-sols when administered hypodermically have a mar[ked] action in bringing about the resolution of the inflammatory symptoms and undoubtedly shortening the usual course of these conditions.

When the blood is examined two-hourly following these injections, though I have never met with any definite leucocytosis, there is an undoubted temporary increase in the relative percentage of the polymorphonuclear leucocytes with few lobes in their nucleus (Arneth's method). As a case improves, however, this reaction to the injection is less marked, and when the patient is well the polymorph cells with the larger number of nuclear lobes are the most numerous. This relative increase in the number of cells with few lobules in their nucleus following these injections may be due to the destruction of the cells with the larger number of lobes at the site of inflammation, these cells being undoubtedly the most actively phagocytic, as those who do much opsonic work are well aware.

The estimation of the opsonic index in these cases before and after the administration of the iron-sol shows that it almost invariably rises to a higher level, with a subsequent slight fall, the index, however, remaining at a somewhat higher point than that which obtained prior to the injection. I have never yet seen a definite negative phase result from such injections; consequently we may presume that the rise of the opsonic index in these cases is not due to auto-inoculation brought about through a bactericidal action of the colloid.

Nottingham.

[1] Biochemische Zeitschrift, Band xxvii., pp. 223–245, 1910.
[2] Bechold, Kolloide in Biologie und Medizin, p. 358.
[3] Berichte der Deutschen Chemischen Gesellschaft, Band xxxvii., p. 3138, 1904.

NOTES ON TWO UNUSUAL CASES OF INFANTILE SCURVY.

BY ERIC PRITCHARD, M.A., M.D. OXON., M.R.C.P. LOND.,
SENIOR ASSISTANT PHYSICIAN TO THE QUEEN'S HOSPITAL FOR CHILDREN.

ON March 27th, 1912, I saw, in consultation with Dr. E. C. Gimson, of Witham, Essex, a female baby aged 9 months. The infant had made satisfactory progress until 14 days previously, when a slight feverish attack supervened, which at the time was ascribed to the cutting of a tooth. The condition, however, did not improve, and the child became obviously ill, with a running temperature ranging beween 100° and 101° F., quick breathing, and a rapid pulse. The striking feature of the case, however, was the development of a generalised œdema, which gave the infant a very puffy and bloated appearance; in the words of the mother, the child "grew larger and larger every day." This condition naturally gave rise to a suspicion of some involvement of the kidney, but the urine, which had been collected and examined before my arrival, showed no trace of albumin or other abnormality.

When I saw the infant on March 27th she was evidently in a serious condition; the respiration rate was about 90, the temperature 101°, and the whole body enormously swollen and œdematous in appearance. There was little or no tenderness of the limbs, only slight sponginess of the gums, and no indications of hæmorrhage from the kidneys, bowels, or other organ in the body, and beyond rapidity of action no abnormality could be detected in the lungs or heart. The reflexes were slightly sluggish, and the infant lay in a distinctly lethargic condition. From a review of the method of feeding I felt convinced that this was an abnormal case of scorbutus, and so subsequent events clearly proved, for although on the following day the infant had hæmorrhage from the bowel, subsidence of the œdema recovery from the other symptoms took place almost dously under antiscorbutic treatment.

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The second case was referred to me by Mr. R. G. Dainty, resident medical officer at the St. Marylebone General Dispensary. The history of the case was as follows. On March 30th of this year an infant, aged 10 months, fell from a mail cart on to a mat on the floor; it did not appear at the time to be seriously injured, but the same evening a swelling gradually appeared on the side of the head on which it had fallen. On the following day the infant was examined by Mr. Dainty, who at the time did not detect any serious symptoms beyond the swelling on the head which had now attained to considerable proportions. When, however, a few days later the swelling had increased rather than decreased in size, and the child seemed lethargic and disinclined to move, Mr. Dainty decided to ask my opinion as to whether I thought that the hæmatoma of the scalp could in any way be associated with intracranial pressure.

On examination I could find no evidence of cerebral pressure, but on inquiry I discovered that the infant had not been well for some days before the accident. The child had been lethargic, disinclined to move, had had no appetite, and seemed generally indisposed. The method of feeding again was not without its significance. I found that there was general tenderness over all the limbs, and evidently strong aversion to being moved or otherwise disturbed. The gums were spongy and of a purple colour. I therefore prescribed an antiscorbutic diet of orange-juice, raw meat-juice, egg water, and milk, and strongly advised against aspiration or other interference with the hæmatoma of the scalp, which by the time of my examination had assumed an enormous size. The general condition of the infant rapidly improved under this treatment, and at the end of 10 days it had practically returned to normal health and showed an increase in weight of over 18 oz.

Harley-street, W.

NOTE OF A CASE OF

URETHRAL CALCULUS OF UNUSUALLY LARGE SIZE.

BY E. A. WALKER, M B. EDIN., F.R.C.S. EDIN.,
CAPTAIN, I.M.S.; CIVIL SURGEON, MEIKTILA, BURMA.

A BURMESE man, aged 28, was admitted to the Meiktila Civil Hospital on Feb. 23rd, 1913, by my assistant surgeon, complaining of inability to pass urine freely; duration of illness three months.

The patient was in bad condition, very thin, covered with itch, and his clothes were soaked with decomposed urine. On examination the bladder was found to be dilated to about 5 inches above the pubes. On passing a metal catheter, this was arrested about the membranous part of the urethra, and a distinct grating sensation was felt as if the instrument had impinged on a stone. This was confirmed by a rectal examination, when a densely hard lump was felt at the anterior part of the prostate and running forward into the perineum. Its exact boundaries could not be made out, but it was realised that the calculus was of large size. The patient's history threw little light on the condition. He insisted that the difficulty in micturition had only been noticed for the last three months, and that before that he was perfectly well except for an attack of gonorrhœa. There was no history of renal colic, nor of any previous passage of calculi by the urethra.

Owing to my absence in the district the operation was not performed until March 2nd. The patient was anæsthetised with chloroform and placed in the lithotomy position. A median perineal incision 2 inches long was made from a point ½ inch in front of the anus. This had subsequently to be enlarged anteriorly almost to the base of the scrotum. The incision was carried down to a staff in the urethra, which was opened just behind the triangular ligament, and the calculus immediately came into view. To expose it properly the urethra had to be slit up for a distance of about 3 inches, dividing parts of the prostatic, membranous, and spongy portions. There was fairly free hæmorrhage from the cut corpus spongiosum at this stage. The

calculus was now found to be lying free in a smooth-walled sac apparently formed by the dilated urethra. It was bathed in foul-smelling, ammoniacal urine and a small quantity of pus. The question of its removal now became acute; unfortunately, we had no lithotrite available, as its use had not been anticipated, and the nearest instrument is kept at Myingyan, the next district headquarters. However, by getting one finger round the calculus and manœuvring it so that its smallest diameter was at right angles to the wound, and by the expenditure of a considerable amount of force, it was eventually delivered. Its removal caused some bruising and tearing of tissue and free hæmorrhage, and the escape of a large quantity of urine. Hæmorrhage was arrested by ligatures and extensive plugging.

in 24 hours, after the injection has quite disappeared, and the only sign that such an injection has been administered, is the pale bluish subcuticular hue of the skin for about half an inch around the puncture, and it disappears after two or three days. Following hypodermic administration, with, of course, similar precautions to those taken in intramuscular injections, in order to avoid puncture of a vein there seems to be little doubt but that the electrolytes and negative colloids of the lymph lead to the formation of a gel, which, however, is rapidly within 24 hours absorbed.

Though this positive hydroxide sol can be employed hypodermically, the fact that no agent has yet been discovered which would completely protect it from the gelatinising effect of the electrolytes and negative colloids of the blood serum, and consequently that the intravenous injection might possibly lead to embolism, has led observers to investigate whether a negative hydroxide sol of iron could be prepared or not. H. W. Fischer[1] has prepared a negative iron hydroxide sol by adding soda lye to a solution of chloride of iron, the glycerine of the lye protecting the colloid. The glycerine and excess of alkali are got rid of by prolonged dialysis running water for 10 days. Instead of glycerine protecting colloid can be used the hexatomic alcohols, mannite or erythrite, or the disaccharide sucrose. This sol when administered intravenously to dogs causes no embolism, and electrolytes in low concentration cause no gelatinisation, as is the case when they are added to the positive hydroxide sol. The sol is standardised colorimetrically by means of a Laurent colorimeter, so as to equal one-quarter the strength of the Pharmacopœial liquor ferri dialysatus; hypodermic doses of 1–2 c.c. cause no pain or swelling, and the slight bluish discolouration of the skin for a few millimetres around the puncture passes away in from 36 to 48 hours. I have used this negative sol for some time past in the hypodermic treatment of different diseases associated with extreme anæmia, and have seen no ill-effects therefrom. That benefit follows the hypodermic administration of these colloids in different varieties of anæmia is evidenced by the rapid clinical improvement as well as increase in the number of red corpuscles and also the percentage of hæmoglobin.

A point of interest which I hope to be able in the future to investigate further is the increased percentage of iron in the dried fæces following this treatment and under similar dietetic conditions, which points to the excretion into the alimentary canal of some of the iron so administered. In the majority of the cases in which these colloids have been administered the use of the ordinary iron preparations orally was contraindicated for one reason or another.

A case of extreme chlorosis in a girl who had been treated for long periods with the inorganic preparations of iron with but slight benefit rapidly improved under these injections, and the corpuscular content of the blood increased from 3,200,000 to 4,150,000 per c.mm. whilst the hæmoglobin increased from 40 to 62 per cent. within a month. In many other cases of both simple and secondary anæmia the degree of improvement could generally be noted by the increase in the corpuscle and hæmoglobin content of the blood, as well as by the marked improvement in the clinical condition of the patients. One case of extreme debility and anæmia following malignant secondary syphilis showed marked improvement of the blood conditions following alternate injections of the colloid hydroxide and Merck's colloid mercury. Another interesting property of the positive iron hydroxide is the fact first noted by R. Bunsen[2] that arsenious acid is taken up by the colloid. Biltz[3] has shown that this is a typical adsorption phenomenon, and recommended the use of fresh iron hydroxide sol as a useful antidote to arsenic poisoning.

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A protected colloid of iron prepared for me at the Crookes Laboratories at the instance of Messrs. Oppenheimers is an ideal protected iron-sol, and is a clear sherry-coloured liquid with a distinct aromatic odour, which is not precipitated by the electrolyte sodium chloride up to 5 per cent. This collo-sol of iron can be evaporated to dryness and again taken up with water. The distinct odour of burning nitrogenous matter which is noticeable during the process indicates that the disperse phase is protected by an albuminous reversible colloid.

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The estimation of the opsonic index in these cases before and after the administration of the iron-sol shows that it almost invariably rises to a higher level, with a subsequent slight fall, the index, however, remaining at a somewhat higher point than that which obtained prior to the injection. I have never yet seen a definite negative phase result from such injections; consequently we may presume that the rise of the opsonic index in these cases is not due to auto-inoculation brought about through a bactericidal action of the colloid.

Nottingham.

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When I saw the infant on March 27th she was evidently in a serious condition; the respiration rate was about 90, the temperature 101°, and the whole body enormously swollen and œdematous in appearance. There was little or no tenderness of the limbs, only slight sponginess of the gums, and no indications of hæmorrhage from the kidneys, bowels, or other organ in the body, and beyond rapidity of action no abnormality could be detected in the lungs or heart. The reflexes were slightly sluggish, and the infant lay in a distinctly lethargic condition. From a review of the method of feeding I felt convinced that this was an abnormal case of scorbutus, and so subsequent events clearly proved, for although on the following day the infant had hæmorrhage from the bowel, subsidence of the œdema and recovery from the other symptoms took place almost miraculously under antiscorbutic treatment.

The interest of this case lies in the extensive development of the œdema from which no part of the body seemed exempt. When I saw her the infant had a pallid, waxy appearance, which I was told was in striking contrast to the healthy, pink colour of the skin of some days before. Another peculiarity of the œdema was that, although it looked as if it would easily pit on pressure, it was practically impossible to obtain a permanent indentation with the fingers, no matter how deeply they were inserted into the skin. I have several times noticed this same characteristic with œdema in scurvy, but I have never seen so extensive a case before, nor one in which the absence of pitting was so marked.

The second case was referred to me by Mr. R. G. Dainty, resident medical officer at the St. Marylebone General Dispensary. The history of the case was as follows. On March 30th of this year an infant, aged 10 months, fell from a mail cart on to a mat on the floor; it did not appear at the time to be seriously injured, but the same evening a swelling gradually appeared on the side of the head on which it had fallen. On the following day the infant was examined by Mr. Dainty, who at the time did not detect any serious symptoms beyond the swelling on the head which had now attained to considerable proportions. When, however, a few days later the swelling had increased rather than decreased in size, and the child seemed lethargic and disinclined to move, Mr. Dainty decided to ask my opinion as to whether I thought that the hæmatoma of the scalp could in any way be associated with intracranial pressure.

On examination I could find no evidence of cerebral pressure, but on inquiry I discovered that the infant had not been well for some days before the accident. The child had been lethargic, disinclined to move, had had no appetite, and seemed generally indisposed. The method of feeding again was not without its significance. I found that there was general tenderness over all the limbs, and evidently strong aversion to being moved or otherwise disturbed. The gums were spongy and of a purple colour. I therefore prescribed an antiscorbutic diet of orange-juice, raw meat-juice, egg water, and milk, and strongly advised against aspiration or other interference with the hæmatoma of the scalp, which by the time of my examination had assumed an enormous size. The general condition of the infant rapidly improved under this treatment, and at the end of 10 days it had practically returned to normal health and showed an increase in weight of over 18 oz.

Harley-street, W.

NOTE OF A CASE OF URETHRAL CALCULUS OF UNUSUALLY LARGE SIZE.

BY E. A. WALKER, M B. EDIN., F.R.C.S. EDIN.,
CAPTAIN, I.M.S.; CIVIL SURGEON, MEIKTILA, BURMA.

A BURMESE man, aged 28, was admitted to the Meiktila Civil Hospital on Feb. 23rd, 1913, by my assistant surgeon, complaining of inability to pass urine freely; duration of illness three months.

The patient was in bad condition, very thin, covered with itch, and his clothes were soaked with decomposed urine. On examination the bladder was found to be dilated to about 5 inches above the pubes. On passing a metal catheter, this was arrested about the membranous part of the urethra, and a distinct grating sensation was felt as if the instrument had impinged on a stone. This was confirmed by a rectal examination, when a densely hard lump was felt at the anterior part of the prostate and running forward into the perineum. Its exact boundaries could not be made out, but it was realised that the calculus was of large size. The patient's history threw little light on the condition. He insisted that the difficulty in micturition had only been noticed for the last three months, and that before that he was perfectly well except for an attack of gonorrhœa. There was no history of renal colic, nor of any previous passage of calculi by the urethra.

Owing to my absence in the district the operation was not performed until March 2nd. The patient was anæsthetised with chloroform and placed in the lithotomy position. A median perineal incision 2 inches long was made from a point ½ inch in front of the anus. This had subsequently to be enlarged anteriorly almost to the base of the scrotum. The incision was carried down to a staff in the urethra, which was opened just behind the triangular ligament, and the calculus immediately came into view. To expose it properly the urethra had to be slit up for a distance of about 3 inches, dividing parts of the prostatic, membranous, and spongy portions. There was fairly free hæmorrhage from the cut corpus spongiosum at this stage. The

calculus was now found to be lying free in a smooth-walled sac apparently formed by the dilated urethra. It was bathed in foul-smelling, ammoniacal urine and a small quantity of pus. The question of its removal now became acute; unfortunately, we had no lithotrite available, as its use had not been anticipated, and the nearest instrument is kept at Myingyan, the next district headquarters. However, by getting one finger round the calculus and manœuvring it so that its smallest diameter was at right angles to the wound, and by the expenditure of a considerable amount of force, it was eventually delivered. Its removal caused some bruising and tearing of tissue and free hæmorrhage, and the escape of a large quantity of urine. Hæmorrhage was arrested by ligatures and extensive plugging.

The patient stood the operation well, and there was practically no shock. On the third day a catheter was tied in, but as soon as the patient was left alone he removed it. This he did on two subsequent occasions, so the attempt was abandoned. At the time of writing (March 21st) a fair quantity of urine comes from the meatus, and the very large cavity in the perineum is gradually filling up. The patient's general condition has improved markedly.

As regards the calculus the photograph (see figure) shows it in the hand of a Burmese nurse, which gives a good idea of its size. Its exact dimensions were—length 2½ in., breadth 1 7-16 in., and depth 1 11-16 in. It weighed 2 oz. 5 dr. when dry and was composed of urates with a coating of phosphates about ¼ in. thick.

Soon after operating on this case I received THE LANCET of Feb. 22nd containing a note on an interesting case of urethral calculus by Captain T. C. Rutherfoord of my service. I have reported my case, as it was one of strictly urethral calculus; no part of it reached the interior of the bladder, and for a strictly urethral specimen it is undoubtedly a large one. I think that the method of crushing *in situ* and piecemeal removal would have been a better one and would have resulted in less damage to the tissues had the lithotrite been available, but as it is the patient is making a good recovery. No other calculi were detected in the bladder on passing the sound.

Meiktila, Burma.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

VACCINE TREATMENT OF MIXED INFECTION IN PULMONARY TUBERCULOSIS.

BY BERNARD HUDSON, M.D. CANTAB., M.R.C.P. LOND.,
VISITING PHYSICIAN, QUEEN ALEXANDRA SANATORIUM, DAVOS-PLATZ.

THE following report on three cases of undoubted mixed infection in pulmonary tuberculosis which were greatly benefited by vaccine treatment may prove of interest to readers of THE LANCET.

CASE 1.—A girl, aged 16. Duration of disease two years. Physical signs: scattered râles over the upper lobe of the left lung. Disease quiescent, no cough or sputum, except very occasionally, and temperature normal. During a period extending over a year there were at more or less regular intervals of one month attacks which can only be compared to influenza—that is to say, the temperature rose to 100° or 101° F., accompanied by malaise, aching pains in the back and limbs, and shivering. These attacks lasted about three or four days and then passed off, but left the patient weak and pulled down, and, generally speaking, kept her back. Many different vaccines were tried, both stock preparations and vaccines prepared from the sputum when there was any, which was only very occasionally. Among the organisms used were the B. Friedländer, B. septus, streptococcus, staphylococcus, pneumococcus, and M. catarrhalis, but with absolutely no effect. The patient also had a prolonged course of tuberculin injections. Finally, an organism resembling the M. catarrhalis was isolated from the nasal and pharyngeal secretions and used as a vaccine.

Since the injections were given the patient has been free from the attacks and is doing very well, putting on weight and improving in general health.

CASE 2.—A woman, aged 35. Duration of disease one year approximately. Physical signs: infiltration of the left upper lobe, only slight and not easy to detect. There was also a considerable amount of general bronchial catarrh. The disease was apparently arrested, the patient as a rule being very well; the temperature was normal and the digestion good, but there was a good deal of sputum (20 c.c. in the 24 hours), which contained a moderate number of tubercle bacilli. For a period of three months she had regular very acute attacks of fever, the temperature usually rising to about 103° F., and in one instance even reaching 104·5°. These attacks occurred at intervals of three weeks, and were accompanied by severe headache, malaise, and shivering. (Malaria was excluded.) The cough and sputum were not increased during the attacks, and there was no pain in the side or elsewhere. These febrile explosions only lasted two days, the temperature then falling as abruptly as it had risen, the defervescence being accompanied by copious sweating. A vaccine was prepared from the sputum, and contained M. catarrhalis and B. Friedländer in equal quantities.

Since the patient has been under treatment with this vaccine the attacks have become less severe, occurring at longer and longer intervals. Her general condition is much improved, the sputum being less in quantity, and I have every hope that she will soon be quite free from these periodical febrile attacks which have been the means of keeping her back for so long.

CASE 3.—A man, aged 37. Physical signs: extensive disease of the left lung, with cavitation of the upper lobe. Activity arrested and patient very robust and with a normal temperature. In December, 1911, he began to have a raised temperature and increase in the amount of sputum, and shortly after this he had a hæmorrhage of about half a pint. This stopped in two or three days' time, but was followed after an interval of 14 days by another one of about the same amount. The bleeding stopped, but again occurred in 14 days, and so on till the patient had had in all eight hæmorrhages, with an interval of 14 days approximately between each one. During all this time the temperature was raised, being 100° to 101° F. in the afternoons. The sputum was trebled in quantity, having increased from 15 to 45 c.c. in the 24 hours; also the sputum was very offensive. After the patient had had eight hæmorrhages the sputum was cultivated and a short-chained streptococcus isolated, from which a vaccine was prepared and injections begun. He had, it is true, two more hæmorrhages, but the temperature gradually came down and the sputum diminished in quantity and became much less purulent in character. He was up and about again by the middle of March, and regained quickly his former health and condition.

I consider that this man had his cavity infected by a streptococcus, and that this was the whole cause of the trouble, raised temperature, increased, offensive sputum, and hæmorrhages, these latter being due in the first instance to the ulcerating action of the secondary organism (in this case a streptococcus) on a vessel, and the subsequent ones to digestion of the clot, by the action of the same organism, which required about 14 days to be accomplished.

Davos-Platz.

NOTES ON A CASE OF RHEUMATOID ARTHRITIS TREATED WITH SUBCUTANEOUS INJECTIONS OF RHEUMATISM PHYLACOGEN.

BY FREDERICK PORTER, M.B., C.M. EDIN.

PHYLACOGENS are "sterile aqueous solutions of metabolic substances generated by bacteria grown in special artificial media." Rheumatism phylacogen is made from a large variety of pathogenic bacteria.

The obscurity of the etiology of rheumatoid arthritis and the results of its treatment form my excuse for publishing the following notes. I believe that the result obtained is sufficient encouragement to pursue the treatment in other cases, and also it may throw some light on the etiology of this disease.

A female aged 58 years, married, had been bedridden for the past four years. The disease started seven years ago with pain and swelling over the right knee, and then spread to other joints, in every way typical of rheumatoid arthritis. She suffered from acute febrile attacks every six or eight weeks. She had also—which I believe to be important—an offensive yellow vaginal discharge slightly tinged with blood. The discharge contained staphylococci and bacilli coli. I gave in all ten injections of phylacogen. I gave 2½ c.c. for four days in succession and on the fifth day I gave 5 c.c. As there was a marked reaction after the last dose, the temperature rising to 103·4° F., I waited for four days and then I repeated the procedure. After the first three doses of 2½ c.c. the reaction was slight, the temperature on the first occasion rising to 100·2° with a slight rigor and a pulse-rate of 110, but these symptoms quickly subsided. On subsequent doses the reaction was less marked, the temperature never rising above 100°, but the patient felt chilly. The patient felt benefit after the third injection in relief of pain and she informed me that she had not slept so well for months. The vaginal discharge completely disappeared and now, six weeks after the last injection, she is still free from pain, and she can be moved about without any discomfort.

This patient had been treated with every well-known remedy, and her diet was carefully regulated. She had undergone a prolonged course of calcium lactate without any benefit. Although the time which has elapsed—under two months—is short in which to draw any conclusion as to the future history of this case, the general benefit this patient received was so marked that it will encourage me to give this method of treatment further trial.

Edinburgh.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Chylous and Chyliform Effusions.

A MEETING of this section was held on May 27th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. H. A. LEDIARD described cases of Chyliform Effusion into the Peritoneum. One of these occurred in a youth, aged 18 years, who had had tuberculous disease within the abdomen for 12 years and ascites for six years. When exploratory incision was made a large amount of pure white milk fluid was evacuated. At the necropsy, made by Professor J. M. Beattie, of Liverpool, there was a fibrous mass of glands obliterating the receptaculum chyli and the mesenteric glands showed dilatation of their efferent channels. Chyle had transuded into the peritoneal cavity. Tubercle was found almost everywhere in the system—spleen, liver, kidney, membranes of the brain, lungs, mesenteric glands, and intestinal peritoneum. The next case was that of a girl, aged 16 years, the subject of lymphadenoma, who had undergone two operations—one for removal of glands in the left neck and the other for removal of glands in the left axilla. Sudden abdominal pain and vomiting led to puncture of the peritoneum and the finding of a chyliform fluid. It was assumed that pressure of glands in the neck had blocked the thoracic duct, there being enlarged glands in the neck on both sides. Dr. Lediard mentioned another case of a female with advanced mitral and liver affection with ascites, which when tapped showed a chyliform fluid.

Mr. MACKENZIE WALLIS spoke of the points of distinction between chylous and pseudo-chylous effusions, which might be summarised briefly as follows:—

Chylous Ascites.	*Pseudo-chylous Ascites.*
1. Tends to accumulate very rapidly, and in consequence large volumes are removed at paracentesis.	1. Collects more slowly, the volume of the fluid varying with the exciting pathological condition.
2. Generally yellowish-white in colour and less perfectly emulsified.	2. In colour a pure milky white solution in the form of an almost perfect emulsion.
3. Degree of opalescence more or less constant at successive tappings.	3. The opacity generally increases or diminishes at successive tappings.
4. Possesses an odour corresponding to the odour of the food ingested.	4. Odourless.
5. Microscopically the fluid contains fine fat globules, but very few cellular elements.	5. Microscopically the quantity of free fat is variable; often numerous fine, highly refractile granules are present, and these do not give the reactions for fat. Cellular elements may be numerous and often contain fat; sometimes very scanty.
6. Generally shows a distinct creamy layer on standing.	6. A cream may or may not form, but does not affect the opalescence; a sediment frequently settles out.
7. Specific gravity generally exceeds 1012.	7. Specific gravity less than 1012.
8. Depression of freezing point about 0·51° C. and approximating that for chyle.	8. Depression of freezing point ranges from 0·56° to 0·61°, and thus corresponds to the figures for blood serum.
9. Total solids vary considerably but usually greater than 4 per cent.	9. Total solids rarely exceed 2 per cent.
10. The total protein content generally exceeds 3 grammes per cent., and of this the serum-albumin is the largest fraction, globulin occurring only in traces.	10. The protein constituents vary between 1 and 3 grammes per cent., and of these the serum-globulin occurs in appreciable quantities.
11. Mucinoid substances absent.	11. Mucinoid sometimes present.
12. The fat content is generally high, varying from 0·4 to 4 per cent. The fat corresponds in all its properties to the fat contained in food.	12. The fat content is generally low, and may be present in traces only; in its melting point and chemical composition it proves to be pathological fat.
13. Of the lipines cholesterol is invariably found, and lecithin only occurs in traces.	13. The most characteristic lipine is lecithin, though cholesterol is occasionally present.
14. No evidence of the presence of a lipine-globulin combination has been given by previous observers.	14. The lecithin is mainly combined with the globulin, and when present is the cause of the opalescence of the fluid. Such fluids resist putrefaction.
15. The salts and the organic substances present approximate to the values found for chyle obtained from the thoracic duct.	15. The salts and organic materials correspond closely to lymph and serous fluids.

Mr. Wallis gave a scheme of procedure necessary to establish whether a fluid obtained from a patient was chylous or pseudo-chylous in nature, or a mixed form. The specific gravity, total solids, and ash should be ascertained as soon as possible after withdrawal. The fat and lipines might be removed in several ways, either by ether extraction of the fluid or extraction with hot alcohol. The ordinary method of extraction with ether had, however, many disadvantages, chief amongst them being the fact that the proteins present were partially precipitated, and in pseudo-chylous effusions the lecithin as well. By precipitating the proteins with boiling alcohol and repeated extraction of the residue with alcohol the lipines and fat were entirely removed. The alcohol residue could then be extracted with ether and the fat and other ether soluble substances isolated. The nature of the fat, its melting-point, saponification figure, and ether figure should be observed, as by this means a distinction between normal human fat and pathological fat could be made. The presence of lecithin and its condition in the fluid were also of importance, and this could be established either by precipitation methods, or by dialysis. The presence or absence of sugar appeared to be of little value for diagnostic purposes, since it might or might not be present in either of the two types of effusion. The other organic constituents, such as urea, uric acid, bile components, occur in very small quantities, and are apparently of no special significance. The presence of such inorganic salts as chlorides and phosphates might be ascertained by an analysis of the ash. Finally, the depression of the freezing point should be determined, as this gives an indication of the quantity and distribution of the inorganic salts present.

SECTION OF THE HISTORY OF MEDICINE.

The Ancient System of Hindu Medicine.—The Hospital and Chapel of Saint Mary Roncevall at Charing Cross.—Dr. Thomas Dover.—Exhibition of Objects of Historical Interest.

A MEETING of this section was held on May 28th, Sir WILLIAM OSLER, the President, being in the chair.

The meeting was declared to be the annual meeting, and it was decided unanimously that as the section was less than a year old no change should be made in the list of officers and council upon the present occasion.

The PRESIDENT announced that at least three lectures would be given during the ensuing year upon subjects connected with the history of medicine. The lectures would be public, and the names of the lecturers, as well as of the subjects chosen, would shortly be made known. He further stated that the section was about to issue a fasciculus containing the various known portraits of William Harvey. The fasciculus would be sold to those members of the section who wished to possess it at a price calculated to cover the expense of production. It would probably contain 16 or 17 portraits.

Dr. D. J. A. CHOWRY-MUTHU (Wells) read a paper on the Ancient System of Hindu Medicine. The Hindu civilisation was, he said, the most ancient in the world. The astronomical allusions in the hymns of the Rig Veda (the oldest literature in the world) went back from 6000 to 4000 B.C. The records found by Megasthenes at Polybhotra, the residence of Chandragupta (312 B.C.), furnished the names and the duration of reign of 153 kings from Dionysius (an Indian king) to Chandragupta, together amounting to 6451 years. India sent out colonies and imparted her culture and civilisation to ancient Egypt, Assyria, Persia, Greece, and later to Mexico, Peru, Java, and Sumatra, and the islands of the Archipelago. She perfected a most polished language (Sanscrit) which became the mother of all European languages. The art of writing had been in use in India since the Vedic times. Count Bjornstjerna had stated that the Hindus possessed "written books of religion" before 2800 B.C., or 800 years before Abraham. The Hindus cultivated every branch of science and philosophy. They invented geometry, trigonometry, algebra, the numerical figures (1 to 9) of arithmetic, the decimal system, and the game of chess now used all over the world. India was the birthplace of fables of animals and tales which are now the nursery stories of England, America, and the rest of the world. The "Thousand and One Nights" was of Hindu origin from Sanscrit (Vrihat Katha), so also was the book of "Sindebad." India's

commerce was as extensive as her emigration. From times of great antiquity she exported spices and aromatics, perfumes and precious stones, gold and silver brocades, silks and shawls, cotton and muslins, diamonds and gold. Her arts and manufacture held the foremost place for many centuries in the ancient world, especially the preparation of fast dyes for textile fabrics, the extraction of indigo, and the tempering of steel. The evolution theory, the atomic theory, the theory of propagation of sound, of ether in space, of light and heat being only different forms of the same thing, were all thought out by such men as Kapilla and Kanada centuries before the Christian era. In the twelfth century A.D. Bhaskara expounded the law of gravity and the principle of the differential calculus, thus anticipating Newton by many centuries. Their medicine was as old as their civilisation. The elemental theory, the humoral pathology that dominated Europe for many centuries, were as old as the Vedas. The Hindus excelled in materia medica and chemistry, and they were the first among the ancients to practise the dissection of the human body and to employ minerals and mercury internally. Many centuries ago they understood the germ theory, circulation of the blood, and inoculation for small-pox. Their treatment of leprosy was most efficacious, their successful treatment of snake-bites astonished Alexander the Great. Their surgery was bold and skilful. They set broken bones and dislocations, they cured hernia, performed operations on the abdomen and uterus, practised lithotomy, and couched for cataract. They trephined the skull, gave anæsthetics in serious operations, and even amputated limbs, and arrested bleeding by pressure, by cup-shaped bandage and by boiling oil or pitch. They were experts in rhinoplastic surgery, which was practised for ages in India. After the death of Buddha, when surgery began to decline and medicine flourished more, medical houses and hospitals were established in India which were provided with medicines and instruments, and attended by physicians who relieved the sick and suffering. Long before Buddha there were medical schools and colleges where pupils were taught in medicine, anatomy, and surgery. In the seventh century A.D. and after the Hindus were the teachers of Arabs who lighted the torch of learning and civilisation in Europe when it was sunk in mediæval darkness and superstition. Arab medicine, which was founded on Hindu medicine, taught European physicians as late as the seventeenth century A.D. Thus European medicine came from the East, and the European peoples owed a great debt to India for their civilisation and their knowledge of medicine.

Dr. JAMES GALLOWAY read a paper on the Hospital and Chapel of Saint Mary Roncevall at Charing Cross. The alien Convent and Hospital of St. Mary Roncevall was founded at Charing in the time of Henry III. and continued to exist to the year 1544, when it was surrendered with all its rights and properties to Henry VIII. The records of this Convent afforded a good opportunity for studying the relations of the Church with the community, as shown in the administration of medical charity. These records, up to the present, were scanty, but more information was being brought to light as the less known documents in the Record Office were deciphered and calendared. The Convent and Hospital was founded at Charing by brethren sent from the Mother House originally established by Charlemagne in the Pass of Roncesvalles through the Western Pyrenees. The canons of Roncevall received letters of protection in the year 1229 from Henry III. in order to solicit alms throughout his possessions in England, Wales, and Ireland. The reason for seeking support throughout the King's possessions and in Scotland was that the priory in the Pyrenees afforded medical aid and rest to the large numbers of pilgrims, especially of the military classes, journeying to the shrine of St. James of Compostella. The canons came to England under the patronage of William Marshall the second, Earl of Pembroke. The close connexions of the Marshall family with the policy and enterprises of the King in France and Spain must have made William Marshall and his father familiar with the Convent in the Pyrenees and highly appreciative of the charitable assistance it gave to travellers. William Marshall, the son, endowed the canons of Roncevall with the land at Charing on which their Hospital and Chapel were built, and with considerable possessions in other parts of the country. Many valuable gifts were also made to the Convent by the King. Under the patronage of these influential benefactors the house at Charing flourished and acquired an important position. Towards the end of the thirteenth century the weakness of the religious houses of alien origin began to be felt, and for a time the Convent suffered considerable loss of property. But under the vigorous administration of one of the procurators, Canon Lupus of Roncesvalles, the affairs of the house were placed in better position, and a period of increasing prosperity seems to have occurred to the middle of the fourteenth century. In 1348–49 the calamity of the Black Death seems to have nearly overwhelmed the Convent. The first records obtainable after this date show that the administration of the Convent and Hospital was passing into the hands of the English clergy. The fortunes of the house had sunk to so low an ebb that in 1379 the Chapel and lands of St. Mary Roncevall were seized by the King in accordance with the statute for the forfeiture of the lands of schismatic aliens. Subsequently to this date great efforts were evidently made by the Mother House at Roncesvalles to recover its possessions and privileges in England. It is noted that in 1389 Garcias, Canon of Roncesvalles, is ratified as warden at Charing Cross at the supplication of the King's kinsman, Charles of Navarre. The conflict between the English and foreign clergy continued, and gradually the influence of the English clergy prevailed. This issue was brought about by the difficulty of the foreign house in sustaining its authority at so great a distance, and also because the Chapel and Hospital at Charing lay near the Royal palace at Westminster, and its privileges and revenues were much desired by the clergy of the Chapel Royal, St. Stephen's. By degrees it seems to have become an appanage of the Chapel Royal. Through all these vicissitudes the medical assistance given by the Hospital seems to have been maintained. The community consisted of the canons and of brethren and sisters who ministered to the sick, and the administration of the institution was modelled on the type of the parent house, where a modified Augustinian rule was observed. In course of time very great changes in the ecclesiastical administration of the Hospital at Charing are noted. In 1475 (15 Ed. IV.) a fraternity or perpetual gild of a master, two wardens, and brethren and sisters, was founded in the Convent. To this fraternity the possessions of Roncevall were given "for the sustenance of three chaplains celebrating divine service, and of the poor people flocking to the Hospital." In this form the Hospital continued to carry on its work apparently with success and energy. Records remain showing a considerable degree of vigour of administration till 1542. But the policy of the King and the greed of certain of his courtiers were not to be denied, and in 1544 the last official act of the Convent is recorded in the Deed of Surrender, to which the impression of the common seal of the fraternity still remains attached. The House, the Chapel of the Convent, and all its possessions were granted to Sir Thomas Carwarden, who had been Master of the Revels to Henry VIII., into whose hands also fell the Church and Convent of the Black Friars in London and the stewardship of Nonsuch Palace in Surrey. This courtier of Henry did not hold the property of Charing long. It passed into the hands of Sir Thomas Brett, who, in his turn, sold it to Henry Howard, Earl of Northampton, who built the first great residence on the spot. Later, it passed to his nephew, the first Earl of Suffolk, then, by an heiress, into the hands of the Northumberland family. While in their possession the original house was greatly enlarged and embellished, and was long known to Londoners under the name of Northumberland House. The land formerly possessed by the Priory of Roncesvalles lies on the bank of the Thames adjoining Northumberland-avenue and Villiers-street, and is occupied by the Grand Hotel, Charing Cross Hotel and railway station, and the neighbouring buildings. (The paper was illustrated by lantern slides.)

Dr. J. A. NIXON (Clifton) read some notes on Dr. Thomas Dover. He said: Thomas Dover was known in his own day as the "Quicksilver Doctor" and in present times as the inventor of pulvis ipecacuanhæ compositus and the discoverer of Selkirk. He came of an interesting and somewhat original family, and himself displayed throughout a long life great independence of thought and action. It is not surprising that Dover has left many vivid impressions of his personality upon the profession he adorned and the towns and countries which he visited. His family is said to have

belonged to Norfolk, at any rate we can trace it no further back. His grandfather was an attorney who settled to practise in the small Cotswold town of Barton-on-the-Heath in the county of Warwickshire. This is a queer corner of England where Warwickshire, Worcestershire, Gloucestershire, and Oxfordshire seem to jostle each other for possession of some of the beauty spots of the land. Robert Dover's name has come down to us as a peace-loving lawyer "who never try'd but two causes, always made up the difference." He lived in the reign of James I., and being a man of hospitable and cheerful disposition he instituted, in imitation of the Olympic games of Greece, an annual meeting for manly sports and exercises, which became known as the Cotswold Games, on a hill near Campden that bears now the name of Dover's Hill. These games were held yearly until in 1851 they were stopped by Act of Parliament, having degenerated into a Whitsun gathering of the lowest scum of the population living between Birmingham and Oxford. An interesting book of encomiastic poems was published in 1636, in which many poets of various attainments, amongst them Ben Jonson and Michael Drayton, made verses in honour of Robert Dover and his games. The title of the collection is "Annalia Dubreusia," and Michael Drayton's contribution stands first, headed, "To my noble friend, Mr. Robert Dover on his brave annuall assemblies upon Cotswold." Robert Dover married Sibilla, daughter of William Cole, Dean of Lincoln and President of Corpus Christi College, Oxford. He had four children, two girls and two boys, of whom the elder boy, Robert, died in infancy. John, his second son, was born in 1614, and is said to have been baptised at Sainsbury. He was one of Prince Rupert's captains, and married Elizabeth Vade, of Barton, by whom he had five daughters and three sons. Of the sons two lived to adult life. John, the elder, entered Magdalen Hall, Oxford, and resided for four years (1661–65), but did not take a degree. He then studied the law at Gray's Inn, and made some slight reputation as a dramatist. Ultimately he took orders in the Church, and in 1688 became Rector of Drayton, Oxon, where he died at the age of 82 in 1725. Thomas, the younger surviving son of Captain John Dover, matriculated at Magdalen Hall, Oxford, in 1680 at the age of 16, and seems to have studied medicine there until 1686, when he migrated to Gonville and Caius College, Cambridge. The register of admissions shows his entry in 1686: "Thomas Dover from St. Mary Hall Oxford, where he resided six years, admitted pensioner to the Scholars' table. Surety: Mr. Lightwine. Matriculated at Magdalen Hall, December 1, 1680. Age 16. Son of John Dover of Barton-on-the-heath, Warwicks., gent. B.A. Oxford 1684, M.B. Cambridge 1687." Shortly after this time Thomas Dover became the resident pupil of Sydenham in London. He has left a description of his treatment on this occasion. "Whilst I lived with Dr. Sydenham, I had myself the Small Pox, and fell ill on the Twelfth-Day. In the Beginning I lost Twenty-two Ounces of Blood: He gave me a vomit; but I find by experience Purging much better. I went abroad, by his Direction till I was blind, and then took to my Bed. I had no Fire allowed in my Room; my Windows were constantly open, My Bed-Clothes were order'd to be laid no higher than my Waist. He made me take Twelve Bottles of Small-Beer, acidulated with Spirit of Vitriol every Twenty-four Hours." Presently Dover settled in Bristol and achieved honourable distinction as the first medical man who gratuitously offered his services on behalf of the poor under the care of the guardians of that city. This was in 1696, during an epidemic of spotted fever of which he wrote later: "About Fifty Years since, this Fever raged so much in Bristol, so that I visited from Twenty-five to thirty Patients, a Day for a considerable Time, besides their poor children taken into their Workhouse, where I engaged myself, for the Encouragement of so good and charitable an Undertaking, to find them Physick, and give them Advice at my own Expence and Trouble, for the two first years. All these poor Children in general had this Fever, yet no more than one died out of the whole Number, which was near two hundred." The hospital where Dover worked is a well-known landmark in Bristol, called St. Peter's Hospital, and now used as the offices of the guardians. In 1708 he sailed on his famous voyage round the world, two accounts of which were published in 1712. Of these the better known is by Woodes-Rogers, captain of the *Duke* and commander of the expedition, while the less known but better written description is by Captain Edward Cooke, second in command of the *Dutchess*. Callander, in his "Voyages to the Terra Australis" (London, 1768), speaks in terms of the highest praise of this expedition as one of the best organised and equipped expeditions that ever left England. The enterprise was undertaken by a group of wealthy Bristol citizens, several of whom were members of the Society of Merchant Venturers in Bristol. Three of the owners were sooner or later Mayors of Bristol, two were sheriffs, and one (John Romsey) town clerk. The ships are said to have been the property of Joseph Harford, whose family is still one of the most notable in Bristol. The *Duke* and *Dutchess* were legally commissioned by His Royal Highness Prince George of Denmark, then Lord High Admiral of Great Britain, Ireland, &c., "to cruise on the Coasts of *Peru* and *Mexico*, in the *South Seas*, against her Majesty's enemies the *French* and *Spaniards*." The expedition consisted of six ships, all armed, under the *Hastings* man of war (42 guns); the *Duke* carried 30 guns and the *Dutchess* 26 guns. The voyage was distinguished by three achievements: the taking of the town of Guayaquil, the capture of the lesser Manila treasure-ship, and the relief of Alexander Selkirk from his voluntary exile on the island of Juan Fernandez. Dr. Dover was appointed after a dispute with Woodes-Rogers to the nominal command of the *Manila* prize, renamed the *Batchelor* frigate. Woodes-Rogers's account of this dispute gives a most unflattering description of Dover—"that it is not for the safety of the rich Spanish prize that Captain Dover command her, because his temper is so violent, that capable men cannot well act under him and himself is uncapable." Cooke, however, took Dover's part, and with a majority of the officers protested that he should be appointed to the command. Ultimately he was appointed the nominal commander with two other captains to navigate the ship and the proviso "that the said Capt. Tho. Dover, shall not molest, hinder or contradict them in their business." In Cooke's opinion Woodes-Rogers was no easy man to get on with, while Callander describes Dover as having the reputation of being "of rough temper and could not easily agree with people about him. But his untoward disposition had one good effect, which was this; that it hindered his making any party to support him in his ill-humours." In spite of all differences the expedition returned safe and laden with rich booty in 1711. Two silver candlesticks still remain in Bristol Cathedral as the thankoffering of John Romsey, the town clerk, for the success of the venture. After his return Dover practised medicine in Bristol, Gloucestershire, and London, at various times, and made no little stir by his advocacy of the use of crude mercury in the treatment of many diseases. It is suggested that it was Dover who introduced Selkirk to Daniel Defoe and persuaded the former to entrust his diary to the famous author of "Robinson Crusoe." Tradition relates that Defoe met Selkirk in the Star Tavern in Bristol. The evidence of such a meeting is wanting, but certainly Selkirk conceived a grievance against Defoe for stealing his story and swelling it into the great romance, "Robinson Crusoe." Mr. Colyer-Ferguson has inquired industriously into the family connexions of Dr. Dover and has brought to light many interesting details. He married soon after leaving Cambridge, though his wife's identity is unsolved. Her Christian name was Joanna and she was buried at Barton-on-the-Heath, April 27th, 1727. Their family consisted of four daughters, of whom the first were twins, baptised at Barton in 1688, and died young. A third daughter, Elizabeth, married John Opie and died without issue. The marriage settlement of this daughter is now in Mr. Colyer-Ferguson's possession, and is interesting from the fact that it bears the signature of Dr. Thomas Dover. The fourth daughter, Sibilla, married John Hunt and left many descendants, of whom Mr. Colyer-Ferguson claims to be one. History and tradition have played strange pranks with Dover's biography, and much confusion has existed between Dr. Thomas Dover and his grandfather Robert Dover. Thomas Dover has been credited by several of the county historians of Gloucestershire with being the founder of the Cotswold games, whilst his grandfather has been stated by the same authorities to be the occupant of Thomas Dover's tomb at Stanway in Gloucestershire. The facts are as follows. Robert Dover, the founder of the games, was buried at Barton on July 24th, 1652. There is an entry to this effect in the Barton register, but I can find no tablet to

his memory there. The tombstone popularly supposed in Barton to be that of Thomas Dover turns out on close inspection (it is nearly undecipherable) to be erected in memory of "William Sands, who sailed round the World with Doctor Dover." This stone stands against the outside of the chancel wall at Barton on the north side. There is an entry in the register of Stanway in Gloucestershire stating that Thomas Dover, M.B., was buried there on April 20th, 1742. I have found two contemporary references to his death. 1. *The Oracle or Bristol Weekly Messenger*, vol. i., Saturday, May 1st, 1742. No. 5, under Domestic Occurrences: "London, April 27, from the *General Evening Post*. *Deaths:* Dr. Thomas Dover in Warwickshire." 2. *London Magazine*, April, 1742, p. 206: "Dr. Thomas Dover, famous for administering quicksilver to his patients, in the 85 year of his age." The last years of Dr. Dover's life were spent at Stanway House (now the seat of Lord Elcho) with his friend Robert Tracy, to whom he dedicated his famous book, "The Ancient Physician's Legacy to his Countrymen." He was buried at his own request in the vault belonging to the Tracy family. This vault is situated under the altar, but no memorials remain of the family or of Dover in the church. Yet oblivion has not wholly overtaken the conqueror of Guayaquil, the home-bringer of Selkirk, and the inventor of Dover's powder.

Mr. P. MACLEOD YEARSLEY showed a painting on ivory of the late John Avery, together with a medal awarded him at the Exhibition of 1851 for an invention "for the examination of the outer passages of the body." He gave a short sketch of Avery's life. Born in 1807, he became M.R.C.S. Eng. in 1829, M.D. Paris in 1831, and received the honorary F.R.C.S. in 1843. He was surgeon-in-chief to a Polish ambulance during the Polish war, and was for some time a prisoner. On his release he commenced consulting practice in London, becoming surgeon to the Charing Cross Hospital. He was chiefly distinguished for his skilful cleft palate operations and his improvements in the exploration and treatment of stricture, but most of his work died with him when, after two years' severe illness, he passed away on March 5th, 1855.

Mr. MACLEOD YEARSLEY also showed a copy of a small book, published in 1796, entitled "Formulae Medicamentorum Concinnatae, or, Elegant Medical Prescriptions for Various Disorders," translated from the Latin by Dr. Hugh Smith, who appears to have been physician to the Middlesex Hospital in 1765 and of some eminence as a practitioner. Some of the "elegant prescriptions," especially those containing live hog-lice, mosaic gold, and tin filings, are interesting instances of the pharmacology of less than 150 years ago.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held in the Royal Infirmary on May 21st. Amongst many cases the following were perhaps the most interesting.

Dr. DAWSON TURNER showed: 1. A case of Medullary Carcinoma in a woman aged 54. The disease commenced three years ago as a growth in the left axilla; this together with the breast was removed in 1911 by Mr. Harold Stiles. In 1912 a rapidly growing recurrent tumour in the scar was removed. In January, 1913, the patient was admitted for radium treatment on account of a secondary growth over the sternum, which was accompanied by lancinating pain. After six weeks' treatment both the growth and the pain had disappeared. 2. Port-wine Stain followed by Cheloid. For the removal of the stain the patient had been treated by carbonic acid snow and nitric acid without much benefit. Four months ago a thickening began to form at the lower part of the stain and spread transversely. On admission on April 3rd, 1913, this could be felt as a hard fibrous band. Under radium treatment this as well as the stain is in process of disappearance.

Dr. G. H. MELVILLE DUNLOP showed: 1. Syphilitic Synovitis of both Knees in a boy. There was a family history of specific disease. The boy was healthy at birth and no signs of congenital syphilis were noticed. A year ago he developed keratitis in the left eye and a month later this spread to the other eye. Six months later the right knee gradually commenced to increase in size without pain or fever. He could move it freely, but it was stiff on walking. This was followed by an exactly similar condition in the left knee. Under salvarsan gradual improvement had commenced. 2. Persistent Purpura in a child aged 10. The hæmorrhages under the skin at first of small size gradually increased. They were scattered all over the body and were produced by the slightest pressure. The spots were more plentiful over the bony prominences, and there were occasional hæmorrhages from the mouth and nose. The disease had lasted two years. The attacks were gradually becoming more severe and the child was becoming anæmic. No treatment had proved of any avail.

Dr. R. A. FLEMING showed: 1. Rachitic-looking Deformity of Pelvis and Legs associated with Spastic Paraplegia in a female aged 26. She was only 4 feet in height, and had been deformed since childhood. She had suffered from stiffness in the hips for the past two years, and had not been able to walk during that time. There was nothing important in the family history. Sensation was unaffected in the legs; the tendon reflexes were exaggerated, and ankle clonus was present with plantar extension. 2. Clubbing of Fingers and Toes from childhood associated with Bronchiectasis of nine years' duration in a sailor aged 24. He had had this clubbing as long as he could remember. He had had several attacks of pneumonia, the last one, in 1910, being followed by empyema of the left side. An operation was performed for the latter condition and the wound healed in seven months. He was markedly cyanosed; there were evidences of bronchiectatic cavities. The "clubbing" was probably due to congenital heart lesion and possibly a patent foramen ovale.

Dr. JOHN EASON showed two cases of Infantilism of Pancreatic Type. The first case was that of a boy, aged 15 years, who had suffered from diarrhœa for six months and diabetes insipidus for four months, and was extremely emaciated. He had no pain or discomfort in the abdomen, but passed very frequent, large, unformed motions containing a high percentage of fat. He was of small stature. Improvement had resulted from treatment. The second case was that of a man aged 20 years, who complained of pain in the abdomen. The duration of the illness was nine years. Eleven years ago he had severe "catarrh of stomach." His present symptoms were: abdominal pain, vomiting after meals, anorexia, diarrhœa, and fatty stools. His emaciation was considerable, and there was moderate delay in development.

Dr. EDWIN BRAMWELL exhibited a case of Paralysis of the Third and Fifth Cranial Nerves in a female aged 41. In June, 1912, after several days of neuralgia, the left side of the face developed facial and corneal herpes with complete paralysis of the left fifth nerve. Trigeminal paralysis still persisted, and there was also now complete palsy of the left third nerve. There was no headache, vomiting, or optic neuritis, and Wassermann's test was negative.

Professor F. M. CAIRD showed: 1. A man, aged 50, after Colostomy early in March, 1908, for intestinal obstruction. At the end of that month resection of columnar-celled carcinoma of the pelvic colon was performed. In November, 1909, the artificial anus was closed. On May 9th of this year an operation was performed for ventral hernia and return of adherent area of old colostomy. 2. Pylorogastrectomy for Carcinoma in a patient aged 52.

Mr. CHARLES W. CATHCART exhibited a case of Epithelioma following injury. A fragment of stone cut the cheek below the left eye. At the end of a week an ulcer formed at the spot and steadily enlarged. It was crateriform, contained stinking sebaceous matter, and showed definite microscopical characters of epithelioma.

Mr. DAVID WALLACE showed: 1. Partial Œsophagectomy in a woman aged 47. The patient had complained of sore-throat for a year without any cause being discovered. Swallowing gradually became more difficult. She was admitted to the ward in April, when an irregular ulcer at the upper part of the œsophagus was seen, and microscopically this was proved to be epithelioma. An operation was performed on May 6th, and the disease was apparently completely removed. 2. Tuberculous Stricture at the Ileocæcal Junction in a patient aged 43. Symptoms of pain with constipation were first noticed six weeks ago. They

were thought to be due to appendicitis, and the patient was sent to infirmary for operation. An easily palpable tumour was found, hard and mobile. There was no visible peristalsis, diarrhœa, or wasting. A provisional diagnosis of carcinoma was given. An operation on April 30th last displayed a tumour of the cæcum with hard nodules disseminated in the mesocolon and in wall of ileum; the glands were hard and enlarged. This was apparently a typical dissemination of carcinoma, and it was thought not to be removable, so short-circuiting was performed by lateral anastomosis of the ileum to the transverse colon. A nodule was removed, and on microscopical examination proved to be typical tubercle. 3. Plated Humerus for Ununited Fracture of three months' duration.

Mr. ALEXANDER MILES showed: 1. Gummatous Meningitis in a man. It affected the region of the pons, and the symptoms simulated cerebral tumour. Wassermann's reaction was positive. In June, 1912, the patient's sight began to fail, and in December he lost the sight of the right eye; there were severe headache, impaired hearing, especially of the right ear, and vomiting. In February of this year he lost the sight of the left eye; there was right facial paralysis. Under treatment of potassium iodide the headache and vomiting ceased, but no improvement in vision occurred. At present there were complete blindness in the right eye, with marked loss of visual acuity in the left eye, greatly contracted field, no hemianopia; nerve deafness on the right side with paralysis of the right side of the face of peripheral type. There was no evidence of involvement of limbs or of other cranial nerves. Under further treatment by iodide and mercury there had been decided improvement in the symptoms. 2. Tumour of Cerebello-pontine Angle in a man. An operation for this was performed 11 months ago. In July, 1911, the patient had severe and persistent occipital headache. In February, 1912, unsteady gait with tendency to fall to the right; great muscular weakness and gnawing pain in the right arm; constant nausea with occasional vomiting; gradual impairment of vision; loss of memory and confusion of ideas; and difficulty in expressing himself. In June, 1912, all his symptoms were rapidly becoming worse; he was stone-deaf in the right ear, and hearing very defective in the left; lateral nystagmus to the right, very slight to the left; marked and advancing optic neuritis; impairment of sense of touch, also to cold, heat, and sense of position. There were no Jacksonian symptoms or localised paralysis of limbs. He had specific infection when 30 years of age. No improvement resulted from iodides and mercury. On June 25th, 1912, an operation was carried out, when a tumour of the size of a pigeon's egg was found in the above angle and was considered irremovable. Present condition: No headache or vomiting; sight much improved; can read evening paper; hearing much improved, and he is bright and cheerful.

Mr. W. J. STUART exhibited three children after operation for Tuberculosis of Bodies of Vertebræ. The spinous processes were partially broken and bent, so that the top of one spine was alongside the base of the next. The laminæ were treated similarly, and in one case a rib was used to reinforce. The operation was subperiosteal and the object was to secure perfect immobilisation by ankylosing diseased vertebræ to one another and to healthy vertebræ. Patients are able to walk in three or four months.

Mr. A. A. SCOT SKIRVING showed: 1. Inveterate case of Tuberculosis of the Left Humerus and Scapula treated by ileo-sigmoidostomy in a girl aged 9 years. In April, 1912, the head of the humerus and three inches of the shaft were removed. X rays after bismuth meals showed slight delay. Ileo-sigmoidostomy was performed on April 30th last, and since then there has been distinct improvement. Some sinuses have closed, others are more healthy. 2. A youth with Mobile Knee-joint after Drainage for Acute Infective Synovitis. The patient received a small punctured wound of the right knee-joint on Feb. 20th, 1913. All the signs and symptoms of very acute infective synovitis were seen on the third day. The joint was opened and four ounces of pus evacuated; it was washed out with 1 in 1000 corrosive solution and drained through the suprapatellar pouch for ten days. Later massage and passive movements were employed. The articular cartilages were not affected.

Mr. JOHN FRASER showed cases to illustrate the elastic ligature treatment of umbilical herniæ in children.

UNITED SERVICES MEDICAL SOCIETY.—A meeting of this society was held on May 21st at the Royal Army Medical College, Fleet-Surgeon P. W. Bassett-Smith, C.B., the President, being in the chair.—Major E. B. Waggett, R.A.M.C. (T.F.), read a paper on the Medical Problem of the Mobilised Territorial Force. While satisfied that performance of the strictly medical and surgical duties of the territorial medical officer would bear comparison with the work of the regulars, and also that his training in field exercises was good and such as to give grounds for a confident anticipation that both rank and file would acquit themselves well in the collecting of wounded and the evacuation of the casualties from the field units, Major Waggett laid stress on the lack of experience of the average territorial medical officer in dealing with the sanitary problems of armies in the field. He pointed out that the fortnight in camp afforded no index of the success or otherwise of the sanitary measures taken, as it was unusual for epidemic disease to make its appearance for at least six weeks after mobilisation. So far as regards the safety or danger of billets as accommodation for large bodies of troops, England was a *terra incognita*, no large bodies of troops having remained in billets, or indeed under canvas, in this country for any length of time. If the experiment was made it would fall to the lot of the Territorial Force to make it, and the responsibility resting on the authorities to provide the force with an efficient sanitary service was very great. The fact was adverted to that Salisbury Plain was sacred so far as disturbing the surface of the ground was concerned, and it was therefore necessary to invoke the aid of a contractor for the removal of excreta, thus depriving the sanitary authorities of the troops from carrying out in peace the duties that would fall to them in war. At the same time, the state of confusion arising when, through any mischance, the contractor failed to carry out his duties gave an opportunity for judging what might possibly occur if the force had suddenly to depend on its own sanitary resources. The question of the revaccination of territorial recruits and the protection of a territorial force on mobilisation by anti-enteric inoculation were discussed, the lecturer being of opinion that small-pox would be very likely to give trouble in the absence of efficient revaccination, and that enteric fever, the historic enemy of armies, would be rife under the conditions ensuing on mobilisation of the territorial force. Major Waggett paid a tribute to the sanitary companies, but recognised the fact that, excellent as they were, they were not sufficiently numerous to cope with the vast problems involved. Further, these units were not intended to replace, nor were they capable of replacing, the regimental sanitary organisation on which so much depended. The problem, then, appeared to resolve itself into one of more adequate training, and to this end Major Waggett suggested that territorial medical officers might be permitted to attend army manœuvres as supernumeraries, thus obtaining an insight into the methods of dealing with large bodies of troops under service conditions, and advocated the formation of a special class of officer who, on qualifying, would be attached for one year to the regulars and thus bring to his service with the territorials the knowledge derived from intimate association for a considerable time with regular troops, both in barracks and on manœuvres. The Territorial Force should be provided, on mobilisation, with a medical service that would not merely pass muster but be of the very best quality.—The following officers took part in the discussion which followed: Surgeon-General W. Babtie, V.C., C.B., C.M.G., Colonel B. M. Skinner, M.V.O., Colonel J. Harper, A.M.S. (T.F.), Lieutenant-Colonel S. Monckton Copeman, F.R.S. (T.F.), and Major S. L. Cummins, R.A.M.C. —Major Waggett thanked the officers who had participated in the discussion, and replied to the various points raised.

LONDON DERMATOLOGICAL SOCIETY.—A meeting of this society was held at Leicester-square on May 20th, Dr. Morgan Dockrell, the President, being in the chair.—Dr. J. L. Bunch showed: 1. A woman, 50 years of age, who complained of suffering from great Skin Irritation caused by the presence of various kinds of supposed lice, specimens of which she brought with her. She was evidently a case of pediculi cerebri. 2. A man who had been in the West Indies and who had a Discharging Pigmented Lesion on the right forearm. Dr. Bunch discussed the question as to whether it was tuberculosis, syphilis, or Delhi boil. 3. A case of Late Secondary or Early Tertiary Lesions on the face of an

Italian.—The President showed a case of Sloughing Ulceration of the Penis in a young man which at one time looked like an epithelioma. A section examined under the microscope revealed a thickening of the stratum corneum and granulosum; the mucosa was thickened but the basal layer was intact.—Dr. W. Griffith showed a case of Mycosis Fungoides which was being treated by X rays, and a case of Lichen Hypertrophicus. He also demonstrated some chromogenic ringworm fungus which had changed from violet to grey.—Dr. W. Knowsley Sibley exhibited a case of Diphtheritic Dermatitis. Dr. T. Galbraith had recently found the Klebs-Löffler bacillus in the discharge from the right external auditory meatus. The patient had now had an injection of 5000 units of antitoxin and was already much better.—Dr. F. Howard Humphris read a paper entitled "Electricity in Some Diseases of the Skin," in which he said that most forms of electricity had been used in dermatology.—The President, Mr. H. C. Samuel, Mr. D. Vinrace, and Mr. E. G. Reeve joined in the discussion.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual provincial meeting of this society was held at the University of Liverpool on May 24th, Proessor E. W. Hope, the President, being in the chair.—Dr. C. O. Stallybrass in a paper upon the Causes of the Declining Incidence of Typhoid Fever, pointed out that this decline had not been confined to the British Isles but had occurred in nearly all civilised countries, and especially in Northern Europe. For example, The Hague vied with Edinburgh in the lowness of its typhoid fever death-rate, now approaching *nil*—a point already reached in many small towns. In many places, of which Paris, Chicago, and Rio de Janeiro were representative, the death-rate had been enormously reduced in the last 30 years, although not yet to the level of Berlin and Vienna. Sweden, Prussia, the Netherlands, and Switzerland had death-rates below those in the British Isles. Among the circumstances responsible for the decline an improved water-supply could not be included, as this was excellent before the period of decline, nor was there any indication of its being due to a diminution in the consumption of contaminated shellfish. It was more probably due to the increase in the number of cases removed to hospital, which in Liverpool had risen from 48 per cent. to 85 per cent. of the notified cases. In Liverpool the decline had been associated with improved sanitary conditions, and especially with the large rehousing schemes that had been carried out. These had involved the destruction of a large number of airless tunnel courts, the houses in which were served by trough closets each common to several families, emptied at most once a day and frequently in a state of unspeakable filthiness. During the last three years, of 500 cases of typhoid fever investigated it was found that 26 per cent. were imported cases, 9 per cent. were due to direct infection, 5 per cent. to shellfish, 1 per cent. to milk, and 5 per cent. were probably not true typhoid. This left 54 per cent. unaccounted for, of which there was a threefold excess in the central area of Liverpool compared with the outer sanitary area.—The President emphasised the importance of dealing with insanitary property and of greater attention being paid to food-supplies, more particularly as regards milk, vegetables, and shellfish. There was a real danger, moreover, in connexion with fly contamination, and the public should be urged to obtain their food-supplies only from those shops where reasonable precautions were taken to prevent the contamination of food by filth from flies. A better sanitary control of the shellfish industry would be of benefit, not only to the public but to those who were engaged in the trade.—Dr. R. Sydney Marsden referred to the connexion of typhoid fever with privy-middens, and stated that with the abolition of the latter in Birkenhead the disease had become practically extinct in the town.—At the close of the meeting the members of the society, to the number of about 120, were entertained to luncheon by the Lord Mayor of Liverpool, and in the afternoon some of the members went for a cruise on the river while others made a motor tour to some of the housing and town-planning schemes of the Liverpool corporation.

UNIVERSITY OF OXFORD: HONORARY DEGREE.—In Convocation on May 27th the degree of D. Litt. honoris causa was conferred upon John Wickham Legg, M.D. Lond.

Reviews and Notices of Books.

Surgical After-Treatment: A Manual of the Conduct of Surgical Convalescence. By L. R. G. CRANDON, A.M., M.D., Assistant in Surgery in Harvard Medical School, Assistant Visiting Surgeon to the Boston City Hospital, &c.; and ALBERT EHRENFRIED, A.B., M.D., Assistant in Anatomy in Harvard Medical School, Surgeon to Mount Sinai Hospital, &c. Second edition, thoroughly revised. With 265 original illustrations. London and Philadelphia: W. B. Saunders Company. 1912. Pp. 831. Price 25*s.* net.

NOT rarely it happens that the most important part of an operation is that which takes place after the operation proper is concluded. Lives are lost and lives are saved by the treatment after the operation, and this stage of treatment deserves much more study and attention than usually it receives. Within recent years, however, several books have been written on the subject of post-operative treatment, and amongst others the first edition of this work; and we are glad to see that the authors have issued a second edition, which has been brought thoroughly up to date Large portions have been rewritten and much new matter has been added.

In the first chapter the authors describe the arrangements for, and the management of, the sick-room. In the second we find an account of the treatment of those immediate post-operative manifestations which may require attention, such as nausea and vomiting, hæmatemesis, restlessness, and sweating. In America the professional or specialist anæsthetist is rather rare, and we agree with the recommendation that such an anæsthetist should be obtained when possible, but we can hardly agree with the advice that nurses should be trained to give anæsthetics, for surely no small amount of medical knowledge is needed. The authors state that if solids or liquids are present in the stomach before the administration of the anæsthetic the vomiting may be severe. This is certainly true as a rule, but it is held by many that giving the patient a glass of water before an anæsthetic diminishes the risk of post-operative vomiting. A useful chapter is that on the pulse, temperature, and respiration of patients after operation, and some charts showing the daily changes are very instructive. The treatment of shock is well described. The authors express the opinion that the most satisfactory method of introducing saline solution into the system is subcutaneously; this is true for the general practitioner, but for the skilled surgeon the intravenous method is certainly superior, though it is undoubtedly more difficult. The authors maintain that the subcutaneous method is more rapid, but with this opinion we can hardly agree, for in cases when rapidity is of great importance the needle can be passed directly into the vein without any previous dissection.

We will not follow the authors through the whole work, which contains all that can be expected, and there is but little need for criticism, but a few points appear to us to be worthy of mention. We offer no objection to the inclusion of a chapter on the preparation of the patient for operation, but surely if such a chapter be given in such a book it should appear as Chapter I. and not as Chapter XXXIX. In this connexion it may be noticed that the tincture of iodine recommended for the preparation of the operation area is 10 per cent., and not 2½ per cent., as in the British Pharmacopœia. The former is unnecessarily strong, for the authors state that it may blister the skin in some cases. A solution of 2 per cent. is of ample strength. In the chapter on the after-treatment of amputation of the breast it is advised that the arm should be fixed firmly to the side with good pressure on

the dissected axilla. This method of bandaging is extremely likely to give rise to adhesions fixing the arm and limiting greatly the movements of the arm subsequently; it is far better to leave the arm free. The chapter on bandaging is hardly required. A valuable section is that dealing with therapeutic immunisation and vaccine therapy, by Dr. George Sanborn, which occupies some 130 pages. It has evidently been written by one who is thoroughly acquainted with both the theory and practice of vaccine treatment.

The book is very fully illustrated, and most of the illustrations are clear and intelligible, but of a few it may be said that they give absolutely no information: as examples of the useless illustrations we may mention Fig. 45, "catheterisation of the female"; Fig. 150, "colostomy"; and Fig. 178, "second step in packing the vagina." We would not have it thought that we undervalue the many excellent illustrations which are to be found in this volume, but we feel that a protest should be made against the practice very prevalent at the present time of overloading books with reproductions of perfectly useless photographs. Photographs are easily obtained, and it is too often assumed that a photograph must be accurate, so that there is a tendency to employ photographs in cases in which, if any illustration is needed, a clear diagram would be much more instructive.

The Bacterial Diseases of Respiration and Vaccines in their Treatment. By R. W. ALLEN, M.D., B.Sc. Lond., late editor *Journal of Vaccine Therapy*, &c. London: H. K. Lewis. 1913. Pp. 236. Price 6*s.* net.

So short a period has elapsed since we had occasion to notice the new edition of Dr. Allen's work on Vaccine Treatment, in which the question of respiratory troubles was pretty adequately dealt with, that the appearance of this fresh volume rather takes away one's breath. The enthusiasm of the author, who believes that "in no other disorders are such uniformly successful results achieved" as in this group of troubles, is doubtless the cause of this further addition to the literature of the subject. The present book deals in successive chapters with the bacteriology of the respiratory tract in health, with methods of investigation and technique, both of staining and culture, with the bacterial findings in various respiratory affections, and with the general principles of vaccine treatment. The last six chapters then take up in turn the particular applications of the method to diseases of the upper respiratory passages, to bronchitis and asthma, to pneumonia and its complications, to a varied group of disorders, including whooping-cough, ozæna, pyorrhœa, and so forth, to mixed infections in pulmonary tuberculosis, and finally to specific remedies for tuberculosis itself.

The book contains much that is of interest. The attention which Dr. Allen has devoted to a study of the bacteriology of "common colds" is well known and deserves all praise. He now attempts to differentiate by their clinical symptoms the varieties of colds caused by the different micro-organisms. These distinctions will need confirmation by others before they can be unreservedly accepted, and we feel that much difficulty will arise in drawing distinctions in this field, since one cold differs from another by almost innumerable degrees of unpleasantness. Nevertheless, it is well to make at least an attempt at clinical accuracy, which may at any rate serve as a basis for further investigation. With regard to pneumonia Dr. Allen holds that in some individuals the pneumococcus is constantly lying in wait in the air-passages and gets its chance owing to some lowering of resistance. It is disappointing that an instance which he quotes, in which these germs persisted, showed that it was practically impossible to dislodge them by vaccines. In the vexed field of asthma the author confesses that his "observations upon the vaccine treatment of asthma have by no means reached finality"—a commendable instance of modesty; and throughout the book he recognises that ordinary methods of treatment are not to be omitted, even by the confirmed vaccinist. On the whole, we are inclined to think that his advice with regard to this procedure in the case of acute disease of the antrum might be applied, as yet at any rate, to many conditions: "It is therefore with considerable hesitation that an expensive course of vaccine treatment should be suggested ..... until opportunity for spontaneous cure has been afforded and aided by ..... other usual remedial measures." The book shows evidence of haste in preparation, as in such phrases as "much likely to prove," and in references to "a subsequent number," "the scope of this paper," and so forth. Names such as "Frankel," "Friedlander," "Munchener," should be printed with a modified vowel—an error which we are surprised to find in the writings of one who quotes German literature with reasonable frequency.

Human Physiology. By Professor LUIGI LUCIANI, Director of the Physiological Institute of the Royal University of Rome. Translated by FRANCES A. WELBY. Edited by Dr. M. CAMIS, Institute of Physiology, University of Pisa. Vol. II. London: Macmillan and Co., Limited. 1913. Pp. 558. Price 18*s.* net.

THE first volume of this work was reviewed in THE LANCET of July 1st, 1911 (p. 19). We welcome the second volume in its English garb, as it presents us with some aspects of the questions with which it deals which are not so familiar to English readers. We refer more especially to the rather full account of the work done by Italian physiologists. The historical aspect and perspective of the several questions is always kept well in view, dates of important observations being freely inserted. To each chapter is appended a bibliography, which should be adequate for most readers.

The subjects discussed are the internal protective secretions, the whole question of digestion, excretion, and the skin. The titles of some of the chapters are suggestive, such as "External Digestive Secretions," "Internal Restitutive Secretions," and "Katabolic Constituents of the Urine." Under "Internal Protective Secretions" a very full and readable account is given of the ductless glands and what is known of their functions. In comparing ordinary œdema with the swelling in myxœdema, the translator uses the word "percussion," no doubt following the author quite accurately, where perhaps the more familiar phrase, pitting on pressure, would be more applicable. The historical development of the investigations is lucidly set forth, and the work of Italian observers noted. Under the head of Graves's disease we find the word "oesophthalmia" for exophthalmia. The author directs particular attention to the renal lesions which occur after extirpation of the entire thyro-parathyroid apparatus. The salivary glands are described as of the "racemose" type; to us they seem to be rather of the tubular type. Some criticisms are offered on the inferences drawn by observers as to the effects of secretin on the pancreatic secretion in the normal body. Indeed, throughout the whole volume many statements current in text-books are submitted to critical analysis. This is one of the merits of the work. We are introduced to a new word, "biligenic," on p. 138. Very interesting is the full account of Barbèra's work on the bile.

The mechanics and chemistry of digestion occupy a large part of the text. Surgeons might read with profit what the author has to say regarding the removal of part of the intestine in the human subject, and several cases are cited where a very considerable length of the intestine has been

removed, thus proving "the great functional adaptability of the intestine" under favourable conditions (p. 230). Anti-ferments as a solution of the question of auto-digestion find little favour with the author. Clinicians also should read the account of some remarkable cases of prolonged anuria (p. 361) in relation to the gastro-intestinal system. Altogether the orderly statement of facts and theories with reference to digestion are most excellent, and the same may be said as regards the functional processes of the kidneys and the skin. The work is illustrated by a large number of microscopical figures, mostly taken from well-known text-books, by tracings, diagrams of apparatus, and original figures. There is an excellent index of authors and of subjects.

We feel sure that this volume will be welcomed by English physiologists and practitioners of medicine, as well as by students who are in pursuit of knowledge carefully sifted and pleasantly presented. The translation does Miss Welby much credit.

Minor Surgery. By LEONARD A. BIDWELL, F.R.C.S. Eng. Second edition, revised and enlarged. With 129 illustrations. London: University of London Press (Hodder and Stoughton and Henry Frowde). 1912. Pp. 299. Price 10*s.* 6*d.*

WITHIN a year of the publication of the first edition a second edition was required, and this fact is a very clear indication that the work has been needed. The lamented death of the author while the second edition was passing through the press did not interfere with the issue, as the proofs have been read by Mr. Percy Dunn. The whole text of the volume had been revised by the author for this edition and several additions had been made, but the general plan remains the same. Differences of opinion are always likely to exist as to the exact scope of a work on "minor surgery," but we think that this volume contains all that may reasonably be looked for in a work of this kind. The style is clear, and even a glance at the book will show that it has been written by one with a wide experience and much practice in teaching. We feel sure that this issue of the work will receive the same general acceptance as the first edition and the success which it so well deserves.

Health Through Diet: a Practical Guide to the Uric Acid-free Diet. By KENNETH G. HAIG, L.R.C.P. Lond., M.R.C.S. Eng. London: Methuen and Co. 1913. Pp. 227. Price 3*s.* 6*d.* net.

THIS volume is written with the advice and assistance of Dr. Alexander Haig, the author's father, and is the result of "eighteen years' personal experience." Mr. Kenneth Haig has been born in the precincts of the temple, and has grown up amidst its ritual. There is so much that is valuable in the suggestions in this volume that it is unfortunate that every evil which afflicts mankind is ascribed to uric acid, and the benefits of a "uric acid-free diet" are magnified to a degree which approaches the ludicrous. From cancer to a falling birth-rate every undesirable condition of life is, it would seem, to be ascribed to the production of uric acid, and its proper elimination may rob even childbirth of its dangers and pangs. We are assured that a holiday of winter sport in Switzerland only owes its exhilaration and charm to the uric acid which is stored up during the period of exercise, and that depression of health is the natural sequence.

But making allowance for exaggerations, there is much that is useful and very practical in this book. There is an appendix of excellent dietaries calculated to relieve the monotony of food of the non-carnivorous man. There is an excellent chapter on the difficult task of "changing diet," showing the dangers of too sudden a change and the steps by which change from a high protein and high purin food should be effected. Special regard should be paid to blood pressure in elderly people, for the rapid elimination of stored uric acid may produce a reduction of pressure dangerous to an enfeebled heart. People on very strict diets find that their food is a bar to many forms of social intercourse, such as dinner parties and "week ends," but the author gives some very practical hints on the reduction, if not the elimination, of these deprivations. On the whole, the book is readable and practical.

Diseases of the Eyes. By C. DEVEREUX MARSHALL, F.R.C.S. Eng., Surgeon to the Royal London (Moorfields) Ophthalmic Hospital. London: University of London Press (H. Frowde). 1912. Pp. 303. Price 10*s.* 6*d.* net.

Mr. Devereux Marshall has added another manual on diseases of the eye to the already long list of students' text-books. As was to be expected from so accomplished a clinician, the clinical matter is excellent so far as it goes. The book is presumably intended only as an introduction to ophthalmology, and omissions must therefore not be too severely criticised. They are such as can be easily rectified in a second edition. Thus there is no reference to Credé's method of prophylaxis in ophthalmia neonatorum; phlyctenular keratitis and hypopyon ulcer are very scantily treated, and spring catarrh deserves a short paragraph. We think the most serious omission in a students' text-book is the absence of any section on optics. Where optical problems have to be discussed, as in retinoscopy, much is assumed, and there are some positive errors. Not infrequently the author shows a tendency to slur over difficulties and express too optimistic an opinion. Thus it is by no means always our experience that after cauterisation of a dendritic ulcer "the process at once stops, the ulcer heals, but it is very seldom necessary to touch it a second time." In general, however, the clinical details and lines of treatment are excellently stated and sound judgment is shown. As an example, we may refer the reader to the remarks on the extraction of senile cataract and the discussion of the *pros* and *cons* of various methods.

There are no coloured plates, but the black-and-white drawings are good (except Fig. 73, of cherry-red spot at macula). It would be well to revise the language in another edition. No good purpose is served by superlatives like "infinitely," and so on, and colloquialisms like "good sunlight is not bad," should obviously be removed.

Knight's Handbook for the Use of Health Insurance Committees and all other Local Authorities, Approved Societies, and Medical Practitioners affected by the National Insurance Act, 1911. London: Charles Knight and Co., Limited. 1913. Pp. 377. Price 6*s.* net.

THE number of official regulations, orders, and reports issued by the National Insurance Commissioners is now enormous. The book before us is a collection of the more important of these papers, together with a complete copy of the National Insurance Act. The author has wisely not limited himself to the documents published by the Insurance Commission, but has also included reports and orders from the Local Government Board, and memoranda published by the Astor Committee and the British Medical Association. Controversy is carefully avoided; criticisms and comments are few, and where they occur are illuminating. The book is written chiefly for members of Insurance Committees, and to them should be of great value for reference purposes. Medical practitioners, except those who are directly concerned with the administration of the Act, are not likely to require such detailed knowledge. The composition of an Insurance Committee and its powers and duties are accurately and fully described. The administration of medical benefit is explained, and the final arrangements for remuneration of medical practitioners are stated. Succeeding chapters deal

with sanatorium, sickness, and maternity benefits, and the finances of an Insurance Committee. The special provisions applying to Scotland and Ireland are also given. Numerous specimen forms for use in connexion with medical and sanatorium benefit, and so forth, are given in appendices, and also a list of addresses of clerks to Insurance Committees in the British Isles. The selection of the material dealt with shows great discrimination, and we congratulate the author upon having produced a convenient and useful reference book.

Die Chirurgischen Untersuchungsmethoden; Lehrbuch für Studierende und Aerzte. Von Professor Dr. HUBERT GEBELE. Mit 154 Abbildungen. München: J. F. Lehmann. 1912. Pp. 192. Price, paper, 8 marks; bound, 9 marks.

THIS book contains an account of the various methods which can be employed in the diagnosis of surgical cases. It describes how to employ inspection, palpation, percussion, and auscultation; it explains the use of the stomach tube; it gives directions for lumbar puncture and puncture of the brain, and points out what may be learned from the employment of such methods. Then come descriptions of the modes of examining the various secretions, excretions, and exudations. Serum diagnosis has a chapter to itself, and the final chapters deal with the methods of endoscopy and with radiography. It may be thought that it would not be possible to put all this information into so small a compass, but the author has succeeded very well in the task which he had set himself, for he has supplied those particulars and details which are so often wanting in the usual text-books on surgery. The numerous illustrations should assist the reader.

MISCELLANEOUS VOLUMES.

OF the making of books for mothers on the puerperal condition and the care of children there seems to be no end, but the ideal book or books on those subjects have not yet appeared. Certainly they are not to be found in either *The Young Mother* or *Babyhood*, by J. BERNARD DAWSON, M.D. Lond., F.R.C.S. (London: Ewart, Seymour, and Co., Limited. 1912. Price 2*s.* 6*d.* net each). Both books, it is true, contain a good deal of common-sense information, but both also contain much detailed and strictly professional information with which it is both unnecessary and undesirable that the lay person should be indoctrinated. We objected, for instance, when reviewing a similar work some time back, to a discussion in such a place of the merits and demerits of chloroform anæsthesia in confinements, and we make the same objection concerning "The Young Mother." The author should dissociate himself from responsibility for the second appendix, which is, in effect, a running commentary of approval of the various foods, toilet preparations, proprietary remedies, and so forth, that are advertised on the opposite pages, and which is apparently identical in both books.——A useful manual for maternity nurses is *Babies*, by MARGARET FRENCH, Sister at the General Lying-in Hospital, Lambeth (London: Macmillan and Co. 1913. Pp. 80. Price 1*s.* net). It is full of practical information, based on scientific sources, and digested for assimilation by those for whom it is intended. The information given is judiciously selected and expressed without any professional parade. We would suggest, however, that owing to the grave importance of preventive measures in regard to ophthalmia neonatorum and the widespread nature of the infection, some reference should be made to it at the outset when, as on pp. 6 and 14, the care of the eyes is referred to. Every new-born child without exception should be watched for it, no matter what the status of its parents may be. The book can be heartily commended.——Another "baby book" is *Our Baby*, by Mrs. J. LANGTON HEWER (Bristol: John Wright and Sons, Limited. 1913. Pp. 192. Boards 1*s.* 6*d.* net, cloth 2*s.* 6*d.* net), which, as it has now reached its fourteenth edition, completing the issue of one hundred thousand copies, must be held to have established its popularity. It contains much wholesome advice on many points in the rearing of children, besides the mere instruction as to washing, dressing, exercise, sleep, simple ailments, &c. We can endorse the opinion uttered by the author in the first edition (1891) that "it would certainly raise the standard of health in the next generation if every girl were obliged, before leaving school, to pass an examination on the very important subject of 'How to bring up a Baby.'" The present edition has been revised and much new matter added, but the revision is hardly perfect, for on p. 2 a reference is given to p. 166, but on turning to that page we find nothing relating to the subject (boracic lotion) for which the reference was made. The additions concern infant feeding, the nursing of sick children, moral training, and tuberculosis; also a chapter on the Special Care of Children in Tropical Countries.

For the purposes of mere review or enumeration, so as to avoid overlooking one or more of a series of points in a group, memoriæ technicæ are very useful and nothing can be urged against their proper use. Dr. N. CORBET FLETCHER'S *Compendium of Aids to First Aid* (London: John Bale, Sons, and Danielsson, Limited. 1913. Pp. 45. Price 6*d.* net) consists of a very ingenious series of mnemonic "tips" for those who have thoroughly mastered the principles of first aid, which will be as useful in checking off the items of their knowledge as an instrument list is at operation.——The *Indian Manual of First Aid*, by Major R. J. BLACKHAM, R.A.M.C. (Calcutta: Thacker, Spink and Co. 1913. Pp. 174. Price R.1), has been prepared especially to meet the requirements of the Indian branch of the St. John Ambulance Association. It follows the syllabus of instruction of the association. We should like to see a reference to the immediate application of a hot saturated solution of boric acid as an application to burns.——It is unnecessary to do more than repeat the commendation already expressed in these columns of Lieutenant-Colonel P. C. GABBETT'S *Manual for Women's Voluntary Aid Detachments* (Bristol: John Wright and Sons, Limited. Pp. 115. Price 1*s.* net), the second revised and enlarged edition of which is before us. Additions have been made especially in regard to the treatment of wounds and combined work, and chapters have been added on Camp Kit for Nurses and the Red Cross Society's arrangements for training.——Only a little over a year ago we noticed the seventh edition of *First Aid to the Injured and Sick, an Advanced Ambulance Handbook*, by Major F. J. WARWICK, R.A.M.C. (T.), and Major A. C. TUNSTALL, R.A.M.C. (T.), and now the eighth edition (Bristol: John Wright and Sons, Limited. 1913. Pp. 246. Price, boards, 1*s.* net; leather, 2*s.* 6*d.* net) is before us. It is an advanced book, and goes quite fully into the subject, so that it will be of service to ambulance lecturers, as well as to pupils who have attained a fair degree of proficiency. Part I. gives an account of the structure and functions of the body in a more detailed degree than is customary in first-aid manuals. Part II. deals with bandaging and the usual emergencies, and includes the new stretcher drill from the Royal Army Medical Corps Training, 1911. A book that has reached its eightieth thousand calls for no further comment.——Four little books, the first of the new S.P. Pocket Guide Series, published by the Scientific Press, Limited, London, price 1*s.* net each, may fitly be mentioned here. *Bandaging Made Easy*, by Miss M. R. HOSKING, Sister-in-charge, Tredegar House, Bow, E., is an admirably clear and concise little handbook, well illustrated. The

introductory remarks on the points controlling the choice of bandage and method of bandaging and the various purposes for which bandages are used are good. The book is obviously the result of practical experience. *A Manual and Atlas of Swedish Exercises*, by THOMAS D. LUKE, M.D. R.U.I., F.R.C.S. Edin., the second of the series, is also clear, concise, and well illustrated, the illustrations of the exercises being on one page, the descriptive accounts on the opposite page. *The Essentials of Fever Nursing*, by LYTTON MAITLAND, M.D., B.S. Lond., D.P.H., the third of the series, is also eminently practical. The introductory paragraphs on infection, immunity, and so forth, contain the right kind and amount of information. The book shows evidence of notes made at the time of encountering difficulties with suggestions that have enforced themselves during actual work. Debatable questions—e.g., the duration of infection in scarlet fever—are handled with judgment and tact. The special diseases dealt with are scarlet fever, measles, German measles, diphtheria, mumps, whooping-cough, typhoid fever, chicken-pox, and erysipelas. The fourth book is *How to Read and Write Prescriptions*, also by Dr. LYTTON MAITLAND. The general explanation of the construction of a prescription and of the pitfalls to be avoided in writing one, is followed by a useful vocabulary of Latin phrases, with their customary abbreviations and English meanings; a table of the popular or alternative names for common drugs, and posological tables. All the books can be commended.

JOURNALS.

Jahreskurse für Aerztliche Fortbildung. Munich: Lehmann. 18 marks per annum.—The April number, dealing with diseases of the kidney, urethra, and skin, contains a review by Dr. Michaud and Dr. Schlecht on the Newer Methods of Estimating the Functional Activity of the Kidney, principally based on the work of Schlayer and v. Monakow. Schlayer has produced various degrees and stages of nephritis in rabbits by means of poisons; thus chromates, mercuric chloride, and aloin induce tubular nephritis with little glomerular involvement; cantharides and arsenic destroy the glomeruli, paralyse the vessels, and cause reduction of the amount of urine, which contains very little albumin or casts; diphtheria toxin affects both tubules and glomeruli. Certain substances do or do not appear in the urine according as the glomeruli or the tubules are principally destroyed, and this fact can be utilised to locate the mischief in man. The substances used are potassium iodide, milk-sugar, sodium chloride, water, and nitrogen. The excretion of potassium iodide depends on the integrity of the tubules, not of the vessels and glomeruli; sodium chloride behaves similarly, but the milk-sugar output varies with the condition of the vessels, and so does the amount of water excreted. These results have been applied to cases of kidney disease in man. The milk-sugar is given by intravenous injection, the other substances by the mouth, and the amount and duration of the excretion are determined. Details as to the method and dosage are given. In acute vascular nephritis the output of iodide and salt is normal, but the water is reduced and the excretion of milk-sugar delayed. In cyclic albuminuria there are no changes in the excretion of the test substances. In contracted granular kidney the milk-sugar output is prolonged, but that of the salts is normal. In parenchymatous nephritis sodium chloride and potassium iodide are excreted badly.—Professor Oberlaender and Dr. Böhme write upon the Treatment of Urethral Stricture. This does not differ from the ordinary English practice.—Professor Jadassohn passes in review recent advances in the Etiology and Pathology of Diseases of the Skin, pointing out that an immense number of these are due to infections or toxic absorption.—Professor Joseph touches briefly on a great number of Skin Affections and their Treatment, including some discussion of the salvarsan and neosalvarsan treatment of syphilis, and also of the vaccine treatment of gonorrhœa.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, MAY 28TH.

THE Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

Erasure of Entry from the Register.

The Council proceeded to hold an inquiry into the accuracy of an entry in the Medical Register. This was the case of Anthony Ciaramelli, registered as c/o Löwy Lajos, Mav. v. Lakatós, Verostorony, Szebenmegyi, Hungary, M.D. Naples, 1903. The person registered at that address had been sent a notice of the inquiry to be held, at which he was invited to attend.

In sending the notice of the inquiry to the person concerned, Mr. C. J. S. Harper, the solicitor to the Council, wrote to him that it would be held "for the purpose of ascertaining the person at whose instance and the circumstances in which an entry was made in the Medical Register (Foreign List) as follows:—

"Ciaramelli, Anthony, c/o Thomas Cook and Son, Ludgate-circus, E.C., 1909, April 27th, M.D. Univ. Naples, 1903.
And further entries of the following changes of address, namely:
"148, Norfolk-street, Glasgow.
"c/o of Herr Löwy Jacob, 1, Tabor Utca, Maros Vasarhely, Hungary.
"Inhanguvo, Beira, E. Africa.
"29, Langham-street, Portland-place, London, W.
"c/o Löwy Lajos, Mav v. Lakatós, Verostorony, Szebenmegyi, Hungary.
"And whether the said entries have been incorrectly made or fraudulently caused to be made in the said Register and should be erased therefrom.
"This notice is sent to you as the person now or lately carrying on practice as a legally qualified medical practitioner in the name of Anthony Ciaramelli."

No person attended in answer to the notice.

Dr. BATEMAN, who appeared for the informants, the Medical Defence Union, stated in addressing the Council that he would submit evidence for the purpose of proving that here they had a case of impersonation of a living medical man. The application purporting to come from him was sent by some other person whose name he could not give. In 1909 an application for registration was received which purported to come from and refer to Dr. Antonio Ciaramelli, who was practising in New York. Registration was granted. Dr. Bateman submitted to the Council photographs of signatures by Dr. Antonio Ciaramelli and of the person who, it was alleged, actually obtained registration. The person so registered was, it appeared, elected a member of the Glasgow branch of the British Medical Association, and it was also stated that he joined six panels under the Insurance Act—Hampstead, Holborn, Paddington, Marylebone, St. Pancras, and Westminster. He was informed that this person had obtained a large number of insured persons on his list. He would have been entitled to a large capitation grant, but owing to the steps which he (Dr. Bateman) had taken he did not think that this person would receive it. From a letter and photographs which he had received from Dr. Antonio Ciaramelli, of New York, it would appear that this person who had passed as Dr. Anthony Ciaramelli was known to him under the name of More and had acted as his professional partner.

The PRESIDENT in announcing the decision of the Council said: Dr. Bateman, I have to inform you that it having been established as a fact that the entry of the name of Dr. Anthony Ciaramelli had been improperly and irregularly procured to be made in the Foreign List of the Medical Register, the Registrar has been directed to remove from the Medical Register the entry of the name of Anthony Ciaramelli. Further, the Council desires me to express its thanks to the Medical Defence Union and to yourself

personally for bringing the information and for the manner in which the facts have been placed before the Council. It moreover desires me to express its desire that you will inform Dr. Antonio Ciaramelli, of New York, in regard to the Council's action in erasing the entry of the name of Anthony Ciaramelli from the Register.

Complaints Against Practitioners.

The Council then considered the case of Herbert Alfred de Pinna, registered as of 20, Grosvenor-street, W., M.R.C.S. Eng., L.R.C.P. Lond., 1905, who had been summoned to appear before the Council on the following charge:—

That being a registered medical practitioner you were on May 1st, 1912, convicted at the Chertsey Petty Sessions of the following misdemeanour, namely, of exposing your person, and were sentenced to six weeks' imprisonment in the second division, which sentence was on July 2nd, 1912, on appeal by you to the Surrey Quarter Sessions, altered to a fine of £50, and you were ordered to pay the costs of the appeal.

The conviction was considered on Nov. 27th, 1912, and at the conclusion of the hearing the PRESIDENT announced to Mr. Elvy Robb, solicitor, who appeared on behalf of Mr. de Pinna, the decision of the Council as follows:—"Mr. Robb: I have to inform you that the Council has found the conviction for misdemeanour alleged against Mr. de Pinna in the notice of inquiry to have been proved, but that judgment has been postponed until the next session of the Council in May."

Mr. de Pinna did not attend, but he was represented by Mr. Elvy Robb, solicitor.

Mr. ELVY ROBB, in addressing the Council, said that the reason why Mr. de Pinna did not appear in person before the Council was that he was in Western Australia and was doing good, useful work there. In these circumstances he did not think that it was incumbent to bring him to this country for the purpose of attending this inquiry. Mr. de Pinna had been appointed resident medical officer to the Malcolm District Hospital in Western Australia, and according to his information he was discharging his duties with skill and ability and was giving satisfaction to the hospital authorities. He read certificates from various persons to the effect that Mr. de Pinna was in every respect giving satisfaction to the inhabitants of the district. At the time of the offence alleged against him, the practitioner had been subjected to mental strain, and for a period he suffered a breakdown. The evidence showed that there had been a temporary derangement. Mr. Elvy Robb put in declarations containing medical evidence from Dr. T. B. Hyslop and other medical men.

The PRESIDENT, in announcing the decision of the Council, said: Mr. Robb: I have to inform you that the Council does not see fit to direct the Registrar to erase from the Medical Register the name of Mr. Herbert de Pinna.

The next case to be considered was that of Alfred Benson, registered as of 79, Maida-vale, W., M.R.C.S. Eng. 1880, M.B.U. Oxfd. 1880, who had been summoned to appear before the Council on the following charge:—

That being a registered medical practitioner you were on Jan. 8th, 1913, convicted at the Central Criminal Court on your own confession of the following misdemeanour—namely, of having unlawfully, falsely, knowingly, and deceitfully put forward and represented that certain declarations made by you upon forms of application for passports for certain persons named Louis Kiseneyder and Lucas Kiischneyder respectively were true, for which offences you were fined £50.

Mr. Benson attended in person.

Mr. C. J. S. HARPER, the Council's solicitor, put in the certificate of conviction. He said that he did not think that there was any fraudulent intent in this case, but there was extraordinary carelessness. On account of the evil effect which might follow from this, it was necessary to bring the matter before the Council.

Mr. BENSON addressed the Council. He said that he did unfortunately sign these certificates, and his action was an error of judgment. He did not give the amount of consideration to the matter which he ought to have done when he signed the certificates. He was exceedingly sorry for what had happened, and the Council might be sure that it would be a lesson to him for the rest of his life and it would not happen again.

In answer to the PRESIDENT, Mr. BENSON stated the persons for whom he had signed the certificates gave him the name of some one as having sent them to him. He had been unable to identify it at the moment, and in his hurry he did not take the necessary care to corroborate it. He had thought that the name was that of a patient.

The PRESIDENT, in announcing the decision of the Council, said: Mr. Alfred Benson, I have to inform you that the Council has found your conviction proved; that the Council takes a very serious view indeed of the gravity of the offence of which you have been convicted; and that it has already marked its sense of the gravity of such offences by issuing in the medical journals and elsewhere in November, 1911, a warning notice as follows:—

Whereas registered medical practitioners are in certain cases bound by law to give, or may be from time to time called upon or requested to give, certificates signed by them in their professional capacity, for subsequent use either in courts of justice or for administrative purposes. And whereas such certificates include, amongst others:—

Certificates: (*a*) Under any statute relating to births, deaths, or disposal of the dead; (*b*) under the Lunacy Acts; (*c*) under the Vaccination Acts; (*d*) under the Factory Acts; (*e*) in relation to children or to excusing school attendance; (*f*) in connexion with sick benefit, insurance, and Friendly Societies; (*g*) in connexion with workmen's compensation; (*h*) in connexion with naval or merchant shipping; (*i*) for procuring the issue of Foreign Office passports; (*j*) for excusing attendance in courts of justice, in the public services, in public offices or at ordinary employments.

And whereas it has been made to appear to the General Council from time to time that some registered medical practitioners have given and signed untrue, misleading, or improper certificates of the above specified or other descriptions.

Now, therefore, the General Medical Council hereby give notice that any registered medical practitioner who shall be shown to have given any untrue, misleading, or improper certificate, whether relating to the several matters above specified or otherwise, is liable to be adjudged by them to be guilty of "infamous conduct in a professional respect" and to have his name erased from the Medical Register under Section 29 of the Medical Act 1858.

In order to give you an opportunity to prove to the Council that you realise the gravity of your offence, and to produce evidence from your professional brethren regarding your character and conduct generally, the Council has postponed judgment till the November session, when you will be required to produce testimony to the effect above specified, and as to your conduct in the interval.

The Council then considered the case of Arthur Richard Hopper, registered as of Bishopsfields, Afonwen, Flints, M.R.C.S. Eng. 1872, L.R.C.P. Lond. 1873, M.D. U. St. And. 1894, who had been summoned to appear before the Council on the following charge:—

That you abused your position as a medical man by committing adultery with a Mrs. Waite, whom you were attending professionally, of which adultery you were found guilty by the decree of the Probate, Divorce and Admiralty Division (Divorce) of the High Court of Justice dated March 7th, and made absolute on Sept. 18th, 1912, in the case of Waite *v.* Waite and Hopper, in which you were the co-respondent. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. Hopper attended in person and was also represented by Mr. Tobin, K.C., instructed by Messrs. Weightman and Co., solicitors, Liverpool.

Mr. C. J. S. HARPER, the solicitor to the Council, put in the decree nisi and the divorce decree absolute, and also a report of the case and a transcript of the summing-up of the judge. He said that in 1901 Dr. Hopper was called in to attend Mrs. Waite. She afterwards went to the south of France, and was confined in the end of 1902 without the knowledge of her husband. It appeared that Dr. Hopper had met her at Dover and had made arrangements with a woman to keep the child until such time as it was adopted by Mr. and Mrs. Waite. At the hearing of the petition for divorce Mrs. Waite did not attend. Servants gave evidence as to acts from which adultery might be inferred. Dr. Hopper went into the witness-box and gave his version of what occurred at Dover. The jury returned a verdict of adultery against Mrs. Waite and Dr. Hopper, with damages of £1000. Dr. Hopper had put in a letter of defence, in which he denied that he had committed adultery, and that the case went wrong because he was ill when he was in the witness-box, and because he was in a state of physical tension there. However, he would submit to the Council that it was not competent for it to go behind the finding of the Divorce Court, and it had neither the machinery nor the powers to investigate over again what had been tried by that court.

Mr. TOBIN, K.C., dissented from the view that the finding of the Divorce Court was conclusive evidence for the Council. A man was guilty of infamous conduct in a professional respect, not by reason of the verdict of a jury, but by reason of acts committed by him.

The Council then adjourned.

THURSDAY, MAY 29TH.

The Council resumed its sitting at its offices, 299, Oxford-street, W., Sir DONALD MACALISTER, the President, being in the chair.

Complaint against a Practitioner.

The Council resumed the hearing of the case against Dr. Arthur Richard Hopper, which had been adjourned from the previous day.

Mr. TOBIN, K.C., continued his argument that the verdict of the jury did not preclude all new evidence in such a case as this. If the Council ruled that the verdict of 12 men, given in the absence of the respondent from the witness-box, was binding on it, and if it were precluded altogether from judging of the facts for itself, the result would be that it would be allowing its functions to be discharged by 12 other men.

Mr. HARPER replied that the Council was not a court of law, with the power of compelling the attendance of witnesses and putting them on oath. With its limited powers of eliciting truth, it could not do over again what the High Courts in this country had already done, and it would be unwise not to accept the decrees of the Divorce Court as binding evidence.

Mr. TOBIN said that the Council was perfectly entitled to have evidence before it that a decree absolute had been granted. His sole proposition was that he had a right to go into the merits of the case. The members of the Council, as the judges in the present charge, had to ascertain the facts for themselves.

After deliberation *in camera*

The PRESIDENT said: I have to state that the verdict and the decrees will be regarded as evidence in this inquiry of the facts involved in the verdict then delivered, but the Council will hear in answer to the charge as formulated any evidence which Mr. Tobin may wish to submit to the Council.

Mr. TOBIN then said that the adultery was alleged to have occurred some time in 1901 or 1902. It was not alleged that Dr. Hopper was the father of the child born at the end of 1902. The petitioner did not allege that Dr. Hopper was the father. Even if he had been guilty, he (Mr. Tobin) had the right to call the attention of the Council to the age of the story. It would have occurred in 1902, about 11 years ago. There was no suggestion that Dr. Hopper had not been conducting himself as an honourable man since then. This was a case in which the Council must surely exercise their powers in some other way than in erasing the name of the practitioner from the Register. Dr. Hopper denied that he was guilty. Mrs. Waite absolutely denied her guilt with him. She was going to be called, and was going to say that she had not misconducted herself at all, and that the child born in the South of France was a legitimate child.

Dr. HOPPER than gave evidence on his own behalf. He denied absolutely that he had ever been guilty of misconduct with Mrs. Waite. He had examined her for her lungs, and when he advised that she should go to the South of France for her health, he had not the slightest idea that she was in the early stage of pregnancy. He admitted that he had gone to Dover, and had seen her there. He had thought that the proposed adoption of a child would have a good effect on her.

Cross-examined by Mr. HARPER, he admitted that inaccuracies had crept into his evidence in the Divorce Court, but that was due to his mental and physical condition at the time.

Mrs. WAITE also gave evidence. She stated that she had never at any time misconducted herself with Dr. Hopper. She had not attended the Divorce Court proceedings. At the time she was residing at an out-of-the-way village in Hereford, and was only informed of the date on which the case was to be heard on the evening before it was actually heard. She did not endeavour to get a new trial because she had been very miserable in her married life. She had not then realised what would be the position of Dr. Hopper. The child whom she gave birth to in France was legitimate, and was her husband's. She had acted on impulse in the course she had subsequently taken in regard to it.

The PRESIDENT announced the decision of the Council as follows: Dr. Hopper, I have to inform you that the facts alleged against you in the notice of inquiry have not been proved to the satisfaction of the Council, and the complaint is accordingly dismissed.

The Council adjourned.

FRIDAY, MAY 30TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

Dental Case.

The Council considered the report of the Dental Committee on the complaint against Joseph John Macaulay and Francis Clement Chandler. In its report the Dental Committee found that the following facts were established by the evidence:—

The said Joseph John Macaulay was registered in the Dentists' Register on Dec. 3rd, 1878, as "in practice before July 22nd, 1878." His address in the Register for 1913 is Lawnside, Kelvin Parade, Cliftonville-road, Belfast. The said Francis Clement Chandler was registered in the Dentists' Register on Sept. 4th, 1878, as "in practice before July 22nd, 1878." His address in the Register for 1913 is 15, Rokeby-avenue, Redland, Bristol. A company called Cole and Co. (Ireland), Limited, was registered on July 29th, 1911, with a nominal capital of £2000 in £1 shares, of which 1802 have been issued. Of these 1800 shares were issued to one Thomas Loftus Cole, who is not a registered dentist, one share was issued to the said Joseph John Macaulay, and one share to the said Francis Clement Chandler. The principal objects of the company are stated in its Memorandum of Association to be:—(*a*) Purchasing or otherwise acquiring the various businesses of artificial teeth maker or dealer in artificial teeth carried on by the said Thomas Loftus Cole, under the style or firm of Cole and Co., in Ireland, together with the goodwill of his said businesses; (*b*) carrying on the business of surgeon dentists, dentists' manufacturers of and dealers in artificial teeth and apparatus, preparations and appliances of all kinds for preserving or improving teeth or for providing artificial substitutes therefor, and any other business incidental thereto.

It appears from the annual return, registered Feb. 11th, 1913, that each of the three shareholders is also a director of the company. During the trial at the Cork assizes in March, 1913, of an action for negligence brought against the company, one John O'Dwyer, who was not a registered dentist, gave evidence that he was employed by the Company and that he performed dental operations in that capacity.

The company has advertised extensively in the Irish press as "surgeon-dentists." The said Joseph John Macaulay had written in answer to the notice of inquiry under date May 6th, 1913, stating that there was no alternative but to sever his connexion with the company, which he had done that day. The said Francis Clement Chandler had also written in reply to the notice of inquiry stating that he had now heard for the first time that he was a director and that he would at once leave the employ of the company. No evidence, however, was produced by or on behalf of either practitioner in verification of these statements.

The complainants were the British Dental Association, who were represented by Mr. R. W. Turner, counsel, instructed by Messrs. Bowman and Curtis-Hayward, solicitors.

Mr. Macaulay and Mr. Chandler did not appear, nor were they represented.

Mr. R. W. TURNER said that as the law stood in Ireland it had not been found possible to penalise a company like this one for using the title "surgeon-dentists." However, he submitted that the persons in question employed an unqualified person to carry on its work.

The PRESIDENT said: I have to announce that on the facts found by the Dental Committee it has been proved to the satisfaction of the Council that Joseph John Macaulay and Francis Clement Chandler have been guilty of conduct infamous or disgraceful in a professional respect, and the Council has directed the Registrar to erase from the Dentists Register the names of Joseph John Macaulay and Francis Clement Chandler.

Exemptions from Professional Examinations.

A report was received from the Examination Committee in regard to exemptions from portions of professional examinations on the ground that candidates had passed certain examinations conducted by bodies whose degrees and diplomas were not recognised for registration in this country.

Sir CHARLES BALL moved that the following recommendation of the committee should be adopted:—

That a copy of this report be sent to the universities and other licensing bodies in the United Kingdom, and that they be requested to inform the Medical Council under what conditions (if any) they are prepared to recognise (as equivalent to their own) the professional examinations held by universities and licensing bodies whose degrees or diplomas are not registrable in the United Kingdom; and in the event of their proposing hereafter to grant such recognition, that they be further requested to supply the Medical Council with (1) a copy of their regulations on the subject, with (2) a list of the examining bodies whose examinations they are prepared to accept, for the purpose of exempting candidates from any of their own professional examinations, other than their final examinations in medicine, surgery, and midwifery, and with (3) a statement of the grounds on which they base their recognition of the examinations as being of adequate standard.

He said that the committee had considered the subject of these exemptions, but they were sorry that they had ceased to have the advantage of having Sir David McVail as chairman, as his knowledge of the Acts of Parliament and of the procedure of the Council was very great. The members of the committee during the recess took a considerable amount of trouble to go through the drafts of this report, so that he was now able to say that it had been adopted unanimously by them. They had had before them a return made by Mr. King, the Registrar, as to the exemptions of

this kind granted in the five years 1907–1911. They found that only nine of the licensing authorities had accepted certificates from candidates passing examinations by bodies who had not the privilege of giving registrable diplomas. Fourteen of the licensing authorities said that they had given no such exemptions during that time. Of the nine authorities who did grant exemptions, the Universities of Manchester and Bristol only gave exemption in one case each. The former exempted from the first, second, and third examinations because the candidate was an M.D. of Geneva. The latter granted exemption from the first professional examination as the candidate was an Associate of the Royal College of Science, London, and M.A., Ph.D. of Heidelberg. The committee found that 124 exemptions had been granted by the Conjoint Board of England. It was quite obvious that the high standing of its diplomas would naturally attract colonial and foreign surgeons who were desirous of obtaining a qualification to admit them to the Medical Register. The committee had before them the percentage of the exemptions to the number qualified, but the majority of the bodies gave a very small percentage of exemptions to the numbers of persons who qualified. Two licensing authorities seemed to grant these exemptions in a much larger proportion—the Apothecaries' Society of London and the Apothecaries' Hall of Dublin. The percentage of the Apothecaries' Society of London was 8·9 per cent., but that of the Apothecaries' Hall of Dublin was 59·1 per cent. The latter gave exemptions to 22 candidates, and the number qualified was 37. The committee were asked whether the granting of exemptions of this kind should be continued. It appeared to them that this was a question largely in the discretion of the licensing authorities themselves. All the Council could do would be, if it became evident that exemptions were being granted on account of examinations of insufficient standard, to deal with them under their powers under the Medical Act. Many of these exemptions were granted for examinations where it would be impossible to suggest that the standard was not adequate. Last year a motion was adopted by the Council on the granting of exemptions on account of examinations passed by candidates in the Indian Subordinate Medical Department. It was possible that some of the examinations which had been accepted by some of the bodies for exemption might be dealt with in the same way. It was obvious that no general rule could be suggested. In looking through the list the committee found that 117 candidates received exemptions on account of examinations which they had passed in the Dominion of Canada. However, the Medical Council for the whole Dominion of Canada was coming into operation and the committee hoped that this was the beginning of what might perhaps be a very intimate mutual recognition of medical qualifications. If this should prove to be the case it would do away with half the cases in the list of exemptions. As to the conditions under which the various licensing bodies received such certificates of exemptions, the Conjoint Board for England published a very complete list, which had been compiled with great care, of the foreign and colonial examinations which they were willing to accept. The Scottish and the Irish Conjoint Boards had similar lists. The Apothecaries' Society of London stated in their regulations that they would grant exemption to candidates from all examinations except the final group on producing evidence that they had passed similar examinations to those conducted by boards recognised by the Society.

Sir JOHN MOORE seconded the motion.

Dr. ADYE-CURRAN complained that Sir Charles Ball had made the Apothecaries' Hall of Dublin a stalking horse. The Hall would never accept any examination except that of a body which was recognised as satisfactory. It appeared from the figures quoted by Sir Charles Ball that the Hall was very much in excess of other bodies granting exemptions. That was not altogether its fault. The Council had deprived it of its preliminary examination, and had thus endeavoured to prevent students entering on its curriculum. Now the authorities of the Hall were twitted with the fact that most of their candidates had not put in their whole course at the Hall. That was perfectly true, but the Council was to blame because it had deprived them of the means of obtaining students. It seemed to him that there was a system of organised persecution directed against the Apothecaries' Hall.

The motion was then agreed to.

The Apothecaries' Hall, Dublin.

A report from the Examination Committee was also received regard to the Apothecaries' Hall of Dublin.

Sir CHARLES BALL said, in explaining the terms of the report, that the committee were of opinion that the reports of the assistant examiners on the methods and standards actually adopted at each qualifying examination should be discontinued. They thought that the General Medical Council should not ask the assistant examiners to report to them on any portion of an examination except that which they conducted themselves. The assistant examiners in surgery for the Apothecaries' Hall were at first nominated by a specially appointed committee of the Council and elected by the President. From 1898 to 1907 one lived in London and the other in Scotland. The Apothecaries' Hall complained, not without reason, of the heavy extra expenditure they were put to for the travelling and hotel expenses of these gentlemen. In 1907 assistant examiners were appointed resident in Dublin, but instead of being nominated as formerly by a committee of the Council, the gentlemen nominated by the Apothecaries' Hall were appointed. This arrangement had been continued ever since as vacancies had arisen, the Apothecaries' Hall having on each occasion nominated a well-known hospital surgeon resident in Dublin, who had been accepted by the Council without question. The Examination Committee considered reports of examinations made for the Council by a perfectly independent inspector preferable to those made by the nominees of the licensing body in question, no matter how distinguished those nominees might be. The cost to the Council of these reports was considerable. In 1911 it reached £148 4*s.* 6*d.* and in 1910 £120 16*s.* 6*d.* These sums included fees paid to the assistant examiners of £126 in 1911 and £105 in 1910. The Medical Act, 1886, Section 3, paragraph 3, stipulated that inspectors should not interfere with the conduct of any examination. The assistant examiners could not, therefore, act as inspectors, and there did not appear to be any warrant in the Act for the payment by the Council of fees to the assistant examiners. The Examination Committee, although they recommended the discontinuance of the reports on the entire final examinations furnished by the assistant examiners, did not consider it would be wise to dispense with all special investigation of these examinations. The number of the exemptions granted to candidates by the Hall had been previously alluded to. The committee, however, had had a further return made of the number of exemptions granted by the Apothecaries' Hall on account of similar examinations held by universities and other licensing corporations whose qualifications did admit to registration. The number was stated to be 29; this added to 22 gave a total of 51 candidates who obtained exemption from some part of their professional examinations during the period of five years, 1907–1911. During the same time only 37 candidates passed the full examination in medicine, surgery, and midwifery, and received the L.A.H. which admitted the holder to registration, so that the number of candidates exempted from some portion of the necessary examinations exceeded the number of those who obtained the qualification by 14. This was equivalent in itself to a considerable rejection rate, without counting candidates who presented themselves more than once for examination, or those, if any, who went up for all their examinations at the Apothecaries' Hall without obtaining any exemption. The returns as hitherto furnished by the Apothecaries' Hall to the Council did not show whether there were any candidates qualified who completed all their professional examinations at the Apothecaries' Hall, but in view of the above figures, if there were any the number must have been extremely small. It was obvious that the candidates who sought this diploma were almost, if not entirely, those who had commenced their series of professional examinations elsewhere. The Examination Committee thought that for the future the information required from the Apothecaries' Hall as to exemptions, and the results of examinations, should be given in such a way that the details of each candidate's course might be readily available for reference. They suggested that, instead of submitting the information in the manner at present adopted, it should appear for the future in the form of a table, in which the previous history of each candidate in reference to the earlier professional examinations and the results of the final examinations held by the Apothecaries' Hall would be at once apparent. The

committee were of opinion that the Apothecaries' Hall should be allowed an opportunity of replying to the report before the Council decided what action, if any, it would take. In conclusion Sir Charles submitted the following seven recommendations from the committee :—

1. That a copy of this report be forwarded to the Apothecaries' Hall, and that they be requested to furnish the Medical Council with a detailed reply to the statements therein contained.
2. That the Apothecaries' Hall be requested for the future to send in their returns (required by the Medical Council under Section 18 of the Medical Act, 1858) of exemptions from parts of examinations, and the results of examinations, in such a way that they can be presented to the Medical Council in the tabular form indicated in the report.
3. That assistant examiners for the Apothecaries' Hall be nominated by a committee elected for this purpose by the Medical Council and appointed by the President.
4. That an inspector be appointed under Section 18 of the Medical Act, 1858, to visit the professional examinations held by the Apothecaries' Hall (other than the portions conducted by the assistant examiners) as often as he considers it necessary, to enable him to prepare an annual report to be submitted to the Medical Council dealing with the standard maintained and the general character of such examinations.
5. That the inspector be appointed by the President, on the recommendation of the committee referred to in No. 3. That the appointment be made in the first instance for one year, and that the remuneration of the inspector be 50 guineas for the year.
6. That for the future the assistant examiners in surgery be required to report to the Medical Council only on the portion of the final examination which they conduct, describing the general standard of knowledge displayed by the candidates and the facilities afforded to them for conducting the examination.
7. That for the future no payment be made out of the funds of the Medical Council to assistant examiners for duties required of them under Section 5 of the Medical Act, 1886.

Recommendations 1 and 2 were adopted without discussion.

On the question that Recommendation 3 should be adopted,

Dr. ADYE-CURRAN remarked that it was not clear to him why, after so many good reports on the Apothecaries' Hall, these proposals should be put forward. The time had surely arrived when the inspection and the reports should cease. It was true that about 20 years ago the examinations of the Hall were returned as not being up-to-date. But at that time the examinations of the Irish Royal Colleges and of Trinity College were also adversely reported upon. The Hall would die hard. It would fight to the last. Certain positions in Ireland could not be held except by medical men who were compounders, and several of them had come to the Hall for its qualification.

After some discussion the recommendation was adopted. Recommendations 4, 5, 6, and 7 were also adopted.

Dr. NORMAN MOORE moved that the members of the Irish Branch Council should form the committee to carry out the duties under Recommendations 3 and 5.

An amendment proposed by Dr. MACKAY to the effect that these duties should be carried out by the Executive Committee having been rejected, the motion of Dr. Norman Moore was agreed to.

A motion appearing on the agenda in the name of Dr. Adye-Curran to the effect that Mr. John Stephen McArdle be appointed an assistant examiner in surgery to the Apothecaries' Hall, Dublin, in the place of Sir Thomas Myles, who retires by rotation, was referred to the committee.

Analysis of Returns.

Reports dealing with the analysis of the yearly tables showing the results of professional medical education during 1911 and of the service examinations since the last session of the Council were received from the Examination Committee.

The Preliminary Examination in General Knowledge.

A report was received from the Education Committee upon the standard of the preliminary examination in general knowledge and upon the revision of the list of examinations to be recognised after the close of the year 1913.

Dr. MACKAY proposed that the following section of the report should be adopted :—

Recommendations adopted by the Council to indicate the standard to be maintained in any preliminary examination in general education.

I. THE CHARACTER OF THE EXAMINATION.

(*a*) In languages, each examination should be of not less than two hours' duration ; and, if it includes questions on prescribed books, of not less than three hours' duration. In mathematics (which should include arithmetic, algebra, and geometry) the examinations should be of not less than three hours' duration.

(*b*) In each examination the questions should be such as to test, not merely memory, but a power of intelligent application of knowledge. In English the paper should include an essay, and should test the candidate's power to apprehend the meaning of an unprepared passage. History and geography should form part of the examination. In classics and modern languages each paper should include a sufficient passage from an unprescribed book for translation into English ; and questions on grammar. There should also be an adequate test of translation from English into the classical or modern language. In arithmetic and algebra the questions and problems should involve intelligent knowledge of the principles underlying the rules. In geometry most of the questions should include a simple rider.

II. THE DISTRIBUTION OF MARKS.

In English not less than a third of the marks should be allotted to the essay and the unprepared passage taken together. In classics and modern languages not more than a third of the marks should be allotted to translation from prescribed books. In arithmetic and algebra the allotment of the marks among the questions should be, as far as possible, proportional to their difficulty, and the marks allotted to each question should be indicated upon the paper. In geometry simple riders to book questions should receive an adequate share of the marks.

III. THE MINIMUM PERCENTAGE OF PASS in each subject should be : (*a*) Latin, 50 per cent. ; Greek, 45 per cent. (*b*) Modern Languages, 50 per cent. (*c*) English, 50 per cent. (*d*) Mathematics, 45 per cent.

IV. THE WHOLE EXAMINATION should be passed at not more than two sittings, but candidates should be allowed to present themselves for re-examination as often as may be necessary to enable them to comply with this condition.

All the examining bodies should furnish yearly to the Council copies of the papers set at their examinations during the year for which the return is made.

Dr. Mackay said that in the decade before 1900 the attention of the Council was very frequently directed to the insufficiency of general education amongst the medical practitioners of this country. The examinations in general knowledge were graded, and now it became clear to the committee that it would be possible for the Council to take another step forward and cut off examinations of the "junior" grade from the list of those recognised without interfering with the supply of candidates. The Council had decided in 1910 that certain examinations should cease to be recognised at the close of the year 1913. The matter had been before the committee for some time, and the idea in their mind now was that the preliminary examination should be of the "intermediate" standard. They had consulted various educational bodies. The proposals, as they were now placed before the Council, had been modified by the committee to meet the suggestions which came from one or other of the examining bodies who had helped the committee with their advice. In the first place, the committee had raised the percentage of pass marks, and, generally speaking, they thought it should be 50 per cent. The idea of the new percentage was that it should be what the ordinary examiner in practice regarded as a pass. In the second place, the committee now considered that "compensation marks" as between subjects should be eliminated, if not absolutely entirely, at least practically. On the other hand, the committee suggested that the demand which was made in the Regulations of the Council that in those examinations all the subjects should be passed at one time should be removed, and that the candidates should be allowed to take the examination in two sittings. That would lessen the strain and make the examination more educative. The committee had been in correspondence in regard to certain Indian and Colonial examinations with the bodies concerned, and they were practically all willing to debate the suggestions which the committee made in regard to them. In one or two cases they asked that the regulations should not be insisted upon for the next year in order that they might have time to make the change. The committee also felt that the examination of the Conjoint Board in Ireland fully met the standard which they laid down, and the examination was needed in Ireland at the present moment.

Dr. KNOX formally seconded.

Mr. THOMSON suggested that the Council should act warily for two reasons—first, because it was doubtful whether they had the statutory powers to deal with this matter, and secondly, because they as a body were not specially qualified by the nature of their constitution to deal with matters affecting general education. There were other institutions in the country which were particularly jealous of their privileges. Some institutions, if it were suggested that the Council should exercise such a right in regard to them, would at once challenge it. Therefore they should be very guarded in the terms which they employed. Apart from the question whether they had the statutory powers, he would point out that, assuming that they were justified in maintaining a register of students, they should take particular care to limit their action so far as it referred to these matters. The conditions which Dr. Mackay asked

them to adopt were prefaced "Recommendations adopted by the Council to indicate the standard to be maintained in any preliminary examination in general education." He would venture to suggest that that should be amended to read: "The Council herewith indicate the scope of the preliminary examination in general education recognised as qualifying for admission to the Students Register." He would move as an amendment that these words should be adopted to preface the recommendations. If they adopted that form of phraseology it would be recognised by those concerned outside that they were not endeavouring to insist upon any right or to exercise any power which they did not possess by statute. Whilst the Council might be at liberty to express their opinion generally as educated men in regard to education, they could not as a body claim that intimate knowledge of detail in respect to secondary education which specialists had. They could not lay down the law relating to detail. He had heard this report criticised by educationists. There was a feeling amongst them that the Council should not lay down the law as to the standard of marks. If they confined themselves to some general statement their recommendations would carry more weight. Some of the passages in the recommendations of the committee might be recommitted for the redrafting.

Dr. MACKAY said that he could not accept Mr. Thomson's amendment, although he was prepared to accept words specifically stating that the preliminary examination was one in regard to which recognition was sought as admitting to the Students Register.

The PRESIDENT observed that the regulations in question applied to bodies which were not on the list at present, but which wanted to get on it in future.

Mr. VERRALL asked whether admission to the Students Register was necessary to the commencement of professional study.

The PRESIDENT replied that it was not. For the convenience of the Council and the licensing bodies generally the Council established a Students Register. It was not obliged to do so by anything in the Medical Acts. It could not compel students to go on the Students Register.

Dr. NORMAN MOORE remarked that the register was a great convenience to the Council, and the large majority of students did go on it. It was only when they went a little beyond what it was competent for them to do that there was any resistance to their recommendations. It was not for them to dictate to the University of Oxford or to the recognised educational authorities of this country. His own feeling was that they should not issue a hard-and-fast series of regulations, but an indication of what they desired from candidates.

Sir C. NIXON thought that the Council should try to secure concerted action in all parts of the kingdom in instituting a school-leaving certificate which would show the character of the education given to a boy.

Sir HENRY MORRIS generally agreed with Mr. Thomson's position. He did not think that a body like the Council was suited to deal with such a large and complicated subject as secondary education. It might be a good thing if they were to defer this subject until November. He also considered it desirable that a definite examination or certificate should be established which would serve as an entrance into the professions generally. The Education Committee might well consider the advisability of bringing forward a recommendation in favour of a leaving certificate and sending it to the Board of Education.

The PRESIDENT: The Council has done that in 1904.

Sir HENRY MORRIS: Would it not be a good thing to repeat it?

Dr. MACKAY: It would be a good thing to instruct the Education Committee to take every opportunity of pressing that view.

Mr. Thomson's amendment was lost on a show of hands.

It was agreed, on the suggestion of Dr. MACKAY, that the introductory statement should read thus: "Recommendations adopted by the Council to indicate the scope and character of the preliminary examination in general education, for which recognition is sought as qualifying for admission to the Students Register."

Dr. SAUNDBY moved as an amendment that the recommendations should be referred back to the committee for further report.

Dr. MACKAY thought that the recommendations were required as a groundwork on which to build. It was essential that Indian and colonial bodies should be informed of the standard which the Council were setting.

Dr. MACDONALD did not see any object was to be gained in referring the report back to the committee.

Sir F. CHAMPNEYS thought the recommendations should be passed in some form and that the Council should express its opinion in favour of the institution of a school-leaving certificate.

The amendment was lost.

Sir ARTHUR CHANCE moved an amendment to omit Recommendation 3 (minimum percentage of pass marks). The amendment was carried by 16 votes to 10.

The other recommendations were adopted with verbal alterations.

Further recommendations of the Education Committee dealing mainly with the provisional recognition of certain Indian and colonial examinations for the year 1914, and also according continued recognition to the preliminary examination of the Royal Colleges of Physicians and Surgeons in Ireland, were adopted.

It was also agreed to grant recognition to the following examinations, subject to the maintenance of the standard defined in the recommendations which had just been adopted by the Council: The College of Preceptors: Preliminary Examination for Medical Students. Educational Institute of Scotland: Preliminary Medical Examination. Intermediate Education Board of Ireland: Middle Grade Examination, with honours in three subjects.

A motion proposed by Sir F. CHAMPNEYS in favour of the institution of a general system of school-leaving certificates was agreed to.

Report of Public Health Committee.

On the motion of Sir JOHN MOORE, seconded by Dr. NEWSHOLME, the report of the Public Health Committee was adopted. It stated that the committee considered correspondence which had been passing between the Registrar, certain medical officers of health for districts containing a population of more than 50,000, the Local Government Board, and certain county councils, relative to the fact that such medical officers of health were not registered as holders of a diploma in sanitary science, public health, or State medicine under Section 21 of the Medical Act, 1886, which registration, under the provisions of Section 18, Subsection (2) of the Local Government Act, 1888, was essential for any person appointed after Jan. 1st, 1892, to be a medical officer of health to a county district, or combination of districts, containing a population of 50,000 or more inhabitants. The committee observed that the Registrar's representations had already resulted in the registration of their diplomas in public health by seven out of 14 medical officers of health who had not previously registered those diplomas.

Report of Pharmacopœia Committee.

On the motion of Dr. NORMAN MOORE the Report of the Pharmacopœia Committee was adopted. It was in the following terms:—

From Nov. 23rd, 1912, to May 26th, 1913, the number of copies of the British Pharmacopœia (1898) sold by the publishers was 409. The total number of copies sold in the year ending May 26th was 1014; the annual average sale is therefore maintained. Up to the present time 45,029 copies of the Pharmacopœia, and 4522 copies of the Indian and Colonial Addendum have been sold. To meet the continued demand a further impression of the Pharmacopœia has been printed, and placed for distribution in the hands of Messrs. Constable and Co., who have been appointed publishers to the Council. This stock will probably suffice to meet the requirements of the public until the new Pharmacopœia is ready for publication.

Six sections of the draft text of the new work have now been prepared by the editors, and are undergoing revision by the committee, with the help of the several committees of reference. The greater part of the work is ready to go to press.

A report by the Committee of Reference in Pharmacy containing suggestions relating to the formulæ for official ointments has been received, and will be published in the usual manner.

The Privy Council Office has forwarded to the Council an invitation from the Belgian Government, transmitted through the Foreign Office, to take part in a forthcoming conference to be held in Brussels. The object of the conference is to discuss the proposed establishment of an International Bureau of Information relating to pharmacopœial unification. The Pharmacopœia Committee recommend that the invitation be accepted, and that the President be authorised to appoint a delegate to represent the Council as the statutory pharmacopœial authority in this country.

Appointment of Committees.

The nominations of the branch councils for the following committees were adopted:—

Examination Committee.—(*a*) English Branch Council:

Dr. Taylor, Dr. Saundby, and Dr. Caton. (*b*) Scottish Branch Council: Sir Thomas Fraser, Dr. Russell, and Dr. Norman Walker. (*c*) Irish Branch Council: Sir John Moore, Sir Charles Ball, and Dr. Kidd.

Education Committee.—(*a*) English Branch Council: Dr. Norman Moore, Sir G. Philipson, and Sir F. Champneys. (*b*) Scottish Branch Council: Dr. Mackay, Mr. Hodsdon, and Dr. Knox. (*c*) Irish Branch Council: Sir Arthur Chance, Sir C. Nixon, and Dr. Little.

Public Health Committee.—(*a*) English Branch Council: Dr. Lorrain Smith, Dr. Newsholme, and Dr. Latimer. (*b*) Scottish Branch Council: Dr. Norman Walker, Dr. Cash, and Dr. McVail. (*c*) Irish Branch Council: Sir John Moore, Dr. Adye-Curran, and Dr. Kidd.

Conclusion of Session.

Mr. NORMAN KING was reappointed General Registrar.

A vote of thanks to the President for his services in the chair was passed.

This concluded the business of the Council, which rose to meet again in November.

THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

Inquiry into Atmospheric Pollution.

THE General Purposes Committee on June 3rd recommended the London County Council to set aside £100 for an inquiry as to suspended impurities in the atmosphere in London. The report reminded the Council that the Committee for the Investigation of Atmospheric Pollution appointed at the International Exhibition and conference held in London in 1912, directed attention to the lack of coördinated effort in estimating the distribution of suspended matter in the air and the absence of reliable data indicating the effect of smoke prevention in atmospheric purification and diminishing the frequency of fogs. The committee suggested that such inquiries as that conducted by THE LANCET in 1911 into the soot-fall of London, Professor J. B. Cohen's and Mr. A. G. Ruston's well-known Leeds experiments, those of the Glasgow corporation, and others of a similar nature would have their value greatly increased if made on a coördinated plan instead of independently. The committee was endeavouring to arrange for municipal authorities to coöperate in obtaining trustworthy and comparable observations as to the state of the atmosphere so far as suspended impurities were concerned.

The Public Control and Public Health Committees were of opinion that the Council should coöperate if other large municipalities agreed to do the same. Among the municipalities which had agreed to set up apparatus and take observations were those of Birmingham, Glasgow, Hull, Leeds, Newcastle-on-Tyne, Plymouth, and York, and the General Purposes Committee was, therefore, of opinion that the coöperation of the Council should be afforded. The estimated cost of each instrument and the analysis of deposit was £21 for the first 12 months, and a subsequent annual expenditure of about £12 for each instrument. Six instruments would prove adequate, at any rate in the early stages of the inquiry. The estimate was approved.

The Milk and Dairies Bill, 1913.

It was urged in a report submitted to the London County Council by the Public Health Committee on June 3rd that the Milk and Dairies Bill, 1913, introduced into the House of Commons by the President of the Local Government Board, involved the loss or curtailment of many powers for dealing with infected milk already possessed by the London County Council. In particular the committee objected that the power of taking samples of milk and of examining cows outside London was entirely lost under the Bill. The necessity for the thorough and systematic inspection of the sources of London's milk-supply was shown by the fact that since July 1st, 1908, no fewer than 2187 visits had been made by the Council's inspectors to farms outside London, 59,616 cows had been inspected, and the supply to London from 642 cows suffering from tuberculosis of the udder had been stopped. The inspectors now had special knowledge, and a register of the sources of supply had been compiled which was of great assistance in carrying out this protective work. Instead of this efficient machinery entirely under the Council's control, it was proposed that the protection of London's milk-supply should be distributed amongst various authorities throughout the country which had no direct interest in the matter. It was a mistake also, in the opinion of the committee, to delegate to the 29 borough councils such powers as remained in London in this connexion. A register such as that on which the efficient administration of the work largely depended could not be compiled and maintained by 29 authorities without overlapping of effort.

The Local Government Committee stated that the allocation of powers proposed by the Bill, coupled with the repeal or curtailment of some of the Council's existing powers, would seriously affect the position of the Council as the central public health authority for London. These provisions appeared to be inconsistent with the declared wish of the Local Government Board that the Council should act as the central authority for London in the matter of the treatment of tuberculosis, and would render more difficult the preparation and organisation of a comprehensive scheme to deal with that matter. The committee considered that the Bill should provide for a clear division of duties between the Council and the sanitary authorities in London so as to avoid overlapping, duplication of administrative machinery, and unnecessary expense to local authorities. Consideration of the report was postponed.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The prizes will be distributed to the students by Lord Ampthill, G.C.S.I., in the Governors' Hall, on Tuesday, June 24th, at 3 P.M. Afterwards a garden party will be held on the terrace, while the various departments of the hospital and school will be open for the inspection of visitors. Academic costume will be worn.

GLASGOW UNIVERSITY CLUB.—The Right Hon. Augustine Birrell, M.P., Lord Rector of the University, presided over the Glasgow University Club dinner which was held at the Trocadero Restaurant, London, on May 30th. The company included Surgeon-General William Babtie, V.C., Major E. T. F. Birrell, R.A.M.C., Sir William J. Collins, Sir Henry Craik, Sir Dyce Duckworth, Sir A. Pearce Gould, Mr. W. Sampson Handley, Dr. C. O. Hawthorne, Sir Donald MacAlister, Sir John McCall, Mr. W. Ernest Miles, Dr. Guthrie Rankin, Mr. Cecil Rowntree, Mr. Charles Stonham, C.M.G., and Dr. J. Sim Wallace. In proposing the toast of the evening, "The University and the Club," Mr. Birrell thanked the members for the honour which they had conferred upon him by making him an honorary member of their club. That club was a prosperous one, and as years went by its prosperity would increase. Early in his political career he had been given three pieces of advice: Never, if he wanted to sit on the front bench, to ask for anything; never to refuse anything; and never to resign. He did not think that he had done any of these things, and their application to his election was obvious. Referring to the increase of universities all over the country, in many of which he had taken the greatest interest, he said that there must always be some preference shown for the older universities, whose adequate histories had yet to be written, and it was a pleasure to think of their long centuries of use. The Rev. W. Parker Hanks, proposing the toast of "The Guests," said that in all universities and the clubs connected with them there was always a tendency to be self-contained and to foster the idea of a clique. Any accession of new blood and new ideas was therefore to be welcomed. Their guests were so distinguished and so many that it was impossible to mention them all by name, but he rejoiced to see that members of the medical profession were in the ascendant. Dr. G. Ogilvie, whose name was coupled with the toast, in a witty speech referred to the distinguished men who had graced the dinner in the past, mentioning the names of Lord Kelvin and Sir William Ramsay, and congratulated his hosts on the excellent menu they had provided, though he had long since come to the conclusion that the exit from the stage of life was hastened by too many entrées. He thanked his hosts for their real Scottish hospitality. Surgeon-General Babtie proposed the toast of "The Chairman," to which Mr. Birrell replied in his usual happy manner. An excellent programme of music added to the pleasures of a most enjoyable evening, and the honorary secretaries, Mr. W. Craig Henderson, D.Sc., and Dr. D. S. Roxburgh, are to be congratulated upon their success in the organisation of the dinner.

THE LANCET.

LONDON: SATURDAY, JUNE 7, 1913.

The Recent Session of the General Medical Council: The Sanctity of Medical Certificates.

THE summer session of the General Medical Council, which opened on May 27th, was completed in four days, having in that time fulfilled the labours foreshadowed in Sir DONALD MACALISTER'S presidential address which we published last week. The Council was also able to show that this prompt method of transacting affairs, resulting as it does in shorter sessions, has produced a better financial position for the year 1912 than the one recorded for the preceding year. The judicious and business-like methods of Sir DONALD MACALISTER in the chair have been largely responsible for the saving of money effected through the saving of time, and we note with pleasure his unanimous re-election for a further period of five years to this important and onerous office. Nor must the treasurers of the Council, Mr. C. S. TOMES and Sir HENRY MORRIS, and the registrar, Mr. NORMAN KING, be omitted from mention in this connexion. In a bureau like the General Medical Council any loosening of the purse-strings or any disorder in the executive department digs almost insensibly a large hole in the resources, when the working over a full year is under consideration. And it cannot be too often insisted upon that economy is of the most vital importance to the General Medical Council, which is dependent upon fortuitous contributions in the shape of registration fees and receipts from the sale of publications for its income. It receives no subsidy from Government, although, on behalf of the public, it discharges the invaluable tasks of keeping the list of registered medical practitioners correct as to names and purged from gross professional and other offenders, and of standardising the educational curricula of those who would join our body. The main reason for the necessity of economy on the part of the General Medical Council lies in the word "fortuitous"; circumstances may at any time influence the class from whom the members of the medical profession are naturally drawn to look to other callings in preference to the practice of physic for their occupation and livelihood, when at once the main source of revenue of the Council would be adversely affected. Circumstances, again, may at any time, as they have done in previous years, entail upon the Council both a prolongation of the ordinary sessions and the institution of extraordinary sessions at an expense for which no special resources can be provided. In 1911 the income of the Council and branch councils fell short of expenditure by £1370. For 1912 there was a surplus of income over expenses amounting to £1105. Nor is this the only satisfactory thing that we have to note. It will be observed that the number of medical students registered at the commencement of their curriculum during the year under consideration has risen by 165, coinciding with the figure representing the average for the preceding five years, and leading us to hope that the recent grave unsettlement of our calling has not had the deterrent effect on recruiting which was expected. Sir HENRY MORRIS puts another interpretation on the figures of student registration, which makes the outlook here less cheerful.

On the third and fourth days of the session the Council proceeded to the consideration of penal cases, and a brief report of the proceedings will be found in our columns this week. To one of these cases we wish to draw special attention—that of Dr. ALFRED BENSON, who was summoned to appear before the Council on the charge that, being a registered medical practitioner, he had made certain declarations upon applications for passports which were untrue. The circumstances of this case were made the subject of trial at the Central Criminal Court early in the year, when Dr. BENSON, being able to establish the fact that he had acted in the matter, however imprudently, in good faith, was fined a small sum of money. There was no complainant to the Council in the case, which was laid before the meeting by the solicitor to the Council in the ordinary course of business. Dr. BENSON having addressed the Council on his own behalf, and having expressed his regret for his unfortunate action, was informed by the President that the Council, while taking a serious view of the matter, would postpone judgment to the November session in order that he might produce testimony as to his character and conduct generally from his professional brethren. That he will be able to satisfy the requirements of the Council all who remember the circumstances of the case know. The leniency of the Council in this particular instance was well judged, for any extreme penalty would have inflicted too heavy a punishment for an act that had its origin in carelessness; but the opportunity may well be taken of pointing out that similar offences are likely in the future to be rigorously treated by the Council, which will have the full support of both the medical profession and the public in any severity it may display. In THE LANCET of Dec. 9th, 1911, p. 1637, a notice was inserted, at the request of the Council, to the effect that it had come to the knowledge of that body that from time to time registered medical practitioners had given and signed untrue, misleading, or improper certificates when they had been called upon to supply such documents in their professional capacity for use either in courts of justice or for administrative purposes. The notice pointed out that certificates were required from medical men under the statutes relating to births, deaths, or disposal of the dead; under the Lunacy, Vaccination, and Factory Acts; in reference to children in different circumstances—the excusing of school attendance, for example; in connexion with sick benefit, insurance and Friendly Societies and workmen's compensation; in the affairs of naval or merchant shipping; for procuring the issue of Foreign Office passports; and for excusing attendance in courts of justice or public offices, or at ordinary employments. To this notice the statement was appended that a registered medical practitioner who was proved to have

given any untrue, misleading, or improper certificate, whether relating to the matters specified or otherwise, was liable to be adjudged by the Council as guilty of infamous conduct in a professional respect and to have his name erased from the Medical Register. This important warning from the disciplinary authority of the profession may well be brought again before our readers. The number of certificates required from medical men is increasing and will increase, while the number of critics of the medical profession in discharge of its official duties, whether those duties are remunerated or gratuitous, is also being multiplied. Lapses from a high standard, always deplorable, will be in future quickly detected and sharply punished.

The privilege of being able to assist the cause of justice and expedite the transaction of business by the simple affixation of a signature to a declaration is one that should be profoundly prized by the medical profession. It is a tribute to our calling of the highest order. It has the double significance of admitting first that the registered medical practitioner, and he alone, is known to have the proper equipment for certifying as to medical conditions; and, secondly, that the registered medical practitioner belongs to a body whose members will realise the sanctity of all such certifying documents and the necessity that the terms should be scrupulously truthful, and employed after all reasonable inquiry has been made to ensure that they are accurate. We do not here and now allude to the fact that too often the giving of certificates by medical men entails a great deal of time and trouble upon them, and is very frequently unpaid labour, and labour whose bulk threatens to increase under modern legislation. These important facts form a side issue. They may give ample right to a medical man to refuse a certificate, but never can excuse him for giving a certificate with an inaccurate or wrong significance, or in an airy and irresponsible manner. We urge upon every medical man the absolute necessity of helping to maintain the sanctity of the medical certificate by refusing to affix his signature, which carries with it the repute and prestige of the whole of the profession to which he belongs, to any statement where he cannot feel that it is to the best of his belief an accurate one. The medical practitioner has just now many critics whose impulse it is to scrutinise his doings closely and whose desire it sometimes is to find him in default. This is one reason for the exercise of care, but we feel that we may well make appeal on the higher ground that the medical profession should be particularly jealous of guarding one of its greatest privileges.

Sex Antagonism.

MR. WALTER HEAPE, the well-known biologist, has written a suggestive and instructive book[1] with this title, in which he points out that the answer to many questions, the asking of which is now producing such acute unrest in modern society, may be found to lie rather with the biologist than the sociologist or the politician. The book is in the outcome inconclusive, and deliberately so, for it is not a medical or biological treatise, and the various functions of the generative glands, with their influence on the whole of the rest of the body, are not discussed. But none the less it contributes most usefully to matters at issue by pointing out that to neglect, in any discussion of sex antagonism, the difference that biologically exists between man and woman is to deprive ourselves of the lessons to be derived from what at first sight might readily be taken to be the primary cause of any war between the sexes—any war that may exist now or that may have existed from time immemorial. The greater part of the volume is occupied by friendly controversy with Dr. J. G. FRAZER, the erudite author of "The Golden Bough," upon the connexion between totemism and exogamy, and it would be difficult to set out the positions of the controversialists in any comprehensible form without defining accurately and discussing authoritatively these two phenomena, while to undertake any such work would obviously be outside the scope of this journal. Moreover, there are but few scholars, if any, who are competent to sum up the judgments of Mr. HEAPE and Dr. FRAZER and say definitely where the one is probably right and where the other is possibly wrong. Much work remains to be done.

Mr. HEAPE'S conclusions are that exogamy, the system under which the males in primitive communities were driven to mate outside certain areas defined by kinship, was a practical effort to satisfy the male sexual impulse; and that totemism, which in various elaborate ways dictated among savage peoples the exogamous divisions, arose from a desire to satisfy the female maternal impulse. And he finds that to this day these two divergent impulses are at the root of sex antagonism—"they exert," he says, "their influence on all the laws which govern sex relations in all social communities, and are never divorced from the minds and the actions of all normally healthy men and women." Whether we go so far as this or not—and we are scarcely prepared to say that normal health has always this specific manifestation—we heartily endorse Mr. HEAPE'S claim that a hearing on sex antagonism should be given to the biologist, whether that antagonism is of primitive origin or is an outgrowth of more modern conditions of environment. The generative system and the digestive system, the two most primitive systems of organs we possess, must have a profound influence on all the other organs of the body, and to neglect the effect of such influence on our habits and customs is to neglect the working of fundamental laws. Undoubtedly much of the present display of sex antagonism is due to blindness of this sort, and the males are every whit as blind as the females. Whatever anyone's views on the subject of women's political rights may be, the counsel that the lessons of biology should at least be taken into account in considering matters at issue between the male and the female ought to be followed. The difficulty of discussion must be great, but it is not to this alone that much of the over-discreet silence has been due, but rather to the fact that while biological happenings can be demonstrated their effects and results must remain a matter of conjecture, at any rate as between the sexes, until a higher level of mutual knowledge is reached. There is

[1] Sex Antagonism. By Walter Heape, M.A., F.R.S. London: Constable and Co., Limited. Pp. 217. Price 7s. 6d. net.

every room on this subject for plain exposition from the leaders of thought and from actual workers in biological or zoological fields, but public debate of the meaning and scope of sex influence, either in popular books or on political platforms, leads to little of value while the disputants are ill-informed. A great deal of the strife which now exists in the form of sex antagonism is too often family strife, and its results, whatever the issue of any imminent struggle may be, must inevitably remain with us for a long time and may prove an evil legacy to the nation. But the more the reasons that may be at the bottom are examined, the better may we regard the chances of mutual understanding and sympathy. Therefore we welcome any argument for the introduction of the biologist into the arena of debate.

In the differentiation of sex we have an essential distinction between the female and the male that cannot be overlooked; and that the earliest organisations of society took advantage of the differences between the sexes to allot to the one side disabilities, perhaps calling them privileges, and to the other side responsibilities, perhaps calling them pleasures, is undoubted. Then, as the conditions of society have changed at various times, the disabilities of one environment have become the responsibilities of another, the hardships of one *milieu* the delights of another, while these changes have been spread over such long periods of years, and have been so gradual in their development, that when they have been perceived at certain epochs they have come as a shock, accompanied by the disturbances inevitably associated with shock. We do not desire to magnify the influence of sex upon character and function, and do not agree with the school that would assert that to exaggerate this influence would be impossible, but we are perfectly certain that in order to treat fairly a bisexual subject we require much more light than we at present enjoy to be thrown upon the separate impulses of the sexes. We may fairly look to biologists to initiate a course of education, so that reasoned opinions may take a more frequent place in our debates than prejudice, or selfishness, or sentiment.

The Report of the Royal Commission on University Education in London.

WE publish this week the last instalment of an abstract of the Report of the Royal Commission on University Education in London, which has been appearing serially in our columns. The abstract has been made with reference to the medical faculty of the University and to the whole question of medical education in the metropolis, and on these subjects will furnish a bird's-eye view of the important recommendations of the Commissioners. It is already evident that there is going to be a great difference of opinion on the merits of many of these recommendations, even though on all hands the clearness and conciseness of the document are admitted, as well as the judicial attitude of the Commissioners' expressions and the ability with which their summaries of involved situations have been made. From the beginning this difference has seemed to us to be inevitable. The recommendations are far-reaching and in some directions unexpected. They brush aside objections to change which have become time-honoured. They deal, of course, in many cases with ills of long existence, but they do not prescribe exactly the same remedies for these ills that we have been accustomed to, and in consequence the old standards of criticism are not applicable to some of the new proposals. All this makes it especially necessary that those concerned should understand exactly what the recommendations signify before either acquiescing in them because of their direct simplicity, or rejecting them because of their drastic nature.

There is no doubt whatever that the University of London, despite its past record and present achievements, shelters, and has sheltered, too much wasted effort without supplying the metropolis with a teaching centre fulfilling the needs of the citizens. The London medical student's case is the one with which we are all so familiar that, in thinking of his needs, we are apt to conclude that all other students have been always content, and that London has been completely content with its University also. This has not been the case, and medical men will be wrong if they consider the problem of the reform of the University of London as concerned only with improving the scheme of medical education in London or perfecting the medical faculty. A great faculty of medicine as one of a group of great faculties is what is required, for a university lives by the universality of its training. Laymen as well as medical men have seized on the case of the medical faculty to illustrate the opportunities which London possesses as a world-centre, and have inferred that the best has so far not been made of these high advantages. The graduation of the student as a doctor of medicine in the University of London might be the finest medical education in the world, and the fact that the curriculum is already very good in many directions makes us desire earnestly to see it better. The clinical routine of London students, common of course to all the hospitals of the country which are connected with a medical school, is the envy of foreign medical faculties. It is admitted that the British student by the time that he obtains his qualifications has been, under our system, more able to familiarise himself with the actual conditions of disease than the medical student under the educational courses that prevail on the continent. And in London the clinical material for the observation of the student is so rich and varied that the educational training obtained in such a centre should prove the value of the general system. But while the practical training is thus high, the academic teaching has not been equally distinguished, and scientific spirit has been wanting too often. The suggestions which the Commissioners make in their valuable report by which this unfortunate condition may be remedied will not meet with general approval, but it is our conviction that as the meaning and promise of the recommendations are better realised a willingness to coöperate in much of the scheme will increase.

It is certain that those concerned with the welfare of medical teaching in London—and in our opinion the whole of the medical profession is to some extent concerned—must consider the problems from the point of view that something is going to be done, and not from the point

of view that things are going to be let drift endlessly. Those who continue to take this view may be rudely disturbed, for it is certain that within no very long space of time a Bill will be drafted, and the probability is that it will follow more or less the lines laid down by the Commissioners in their report. On many important questions medical feeling is sure to run high, and it would be particularly valuable, as saving both time and temper, if agreement could be come to upon some of the debatable points before any Bill arrives. The desirability of the changes suggested may not appear very strong until their meaning is looked into, when their dangers may bulk less large, or their inevitability may become evident. The essential thing is that the spirit which regards the interference of the Commissioners as wanton should die down, and that a real desire in London to subordinate special interests to general welfare should be cultivated.

Annotations.

"Ne quid nimis."

THE BIRTHDAY HONOURS.

THE list of honours which was issued on the King's birthday contained the names of several members of the medical profession whose services to the Sovereign and to the Empire have thus received public recognition. Among the new baronets is Mr. William Arbuthnot Lane, whose professional work is too well known to need further reference. He was one of the surgeons in attendance on the Duchess of Connaught during her recent illness, as was also Major E. S. Worthington, M.V.O., R.A.M.C., medical officer to the Duke of Connaught, and this officer has had conferred upon him the honour of knighthood. Other members of our profession who have received knighthoods are Mr. T. E. Flitcroft, president of the Lancashire and Cheshire Branch of the British Medical Association and chairman of the statutory Medical Committee under the Insurance Act; Mr. A. J. Horne, a past President of the Royal College of Physicians of Ireland; Dr. H. Smalley, medical inspector of local prisons and superintending officer of convict prisons; Mr. R. H. Woods, a past President of the Royal College of Surgeons in Ireland; and Professor E. A. Schäfer, F.R.S., whose name is known throughout the world as an authority upon the subject to which he has devoted his life. In the Order of the Bath Surgeon-General Henry Hamilton, C.B., I.M.S., has been promoted to K.C.B., and Companionships have been conferred upon Deputy Surgeon-General William Maxwell Craig, R.N.; Surgeon-General Louis Edward Anderson, Deputy Director of Medical Services in Ireland; and on Lieutenant-Colonel John Crimmin, V.C., C.I.E., I.M.S. In the Order of St. Michael and St. George Dr. H. P. Keatinge, director of the Egyptian Kasr-el-Ainy Government Hospital and Medical School, and Mr. A. H. Spurrier, late medical officer of health at Zanzibar, have received Companionships. In the Order of the Star of India Lieutenant-Colonel Gerald Godfray Giffard, I.M.S., has been given a Companionship, and in the Order of the Indian Empire a similar honour has been conferred upon Major Robert J. Blackham, R.A.M.C. Colonel William Henry Bull, Assistant Director of Medical Services of the South Midland Territorial Division, and Colonel John Arnallt Jones, Assistant Director of Medical Services of the Welsh Territorial Division, have been appointed Honorary Surgeons to His Majesty, and Colonel William Kinnear, Assistant Director of Medical Services of the Highland Territorial Division, and Colonel Charles Pye Oliver, Assistant Director of Medical Services of the Home Counties Territorial Division, Honorary Physicians to His Majesty. To all of these gentlemen we tender, in the name of the profession to which they belong, our hearty congratulations.

THE PROGRESS OF MODERN THERAPEUTICS.

THE Medical Society of London has had among its long list of orators many distinguished men, and their orations have afforded to several generations of hearers pleasure and instruction, but no oration that we can recall gave these sensations more directly to the audience than that delivered this year by Sir William Whitla. Our readers have had the opportunity of reading the oration in full, so that they know that the orator surveyed the whole realm of modern therapeutics, pointed to the progress which has already been made, and indicated the lines along which the progress of the future would follow. We have no intention of following Sir William Whitla in his journey through the realms of pharmaceutical knowledge; his statements are too clear to need exposition, and want no further authority than he can give them. But his references to salvarsan invite a brief comment. There was a time, and it was not so very long ago, when the maker of new chemical substances acted in a more or less empirical way. He combined groups and so formed a fresh substance, but until he had tested the new substance on an animal he had not the slightest idea as to what its action might be. The result was almost always a matter of surprise; sometimes the new substance was a valuable addition to the therapeutic armoury, but much more often it proved to be interesting only from a structural point of view. That time has now gone by. It cannot, of course, be said that in the formation of new chemical substances surprises never occur. When their properties come under examination we are sometimes startled by unexpected activities, but on the whole it is possible to predict the main properties of any substance which has just been formed before it has been tested on the living body. For now the formation of new organic compounds no longer proceeds on a mere empirical line, but experience has shown that the influence of a certain chemical group endows a compound with certain therapeutic properties, and that the addition of such a group will replace the former activities of a drug in a way which may be predicted. On lines such as these Ehrlich worked, stimulated by his theory of the mode of action of chemical substances, both on the tissues of the living body and on the material of the parasitic organisms. He held that without chemical interaction there could be no therapeutic effect. So it came to pass that when Ehrlich set out on his search for a chemical substance which should destroy the organism of syphilis, he had a clear idea in his mind as to the way in which this destruction should be effected. A new chemical compound, if it is to take a place in our weapons against organisms, should have the power of combining chemically with the tissues of the parasite, and at the same time it must not have the property of combining with the tissues of the host, or at least, if this be not absolutely attainable, it must combine as little as possible with them. Every step taken by Ehrlich was based on these ideas. Every change in the constitution of the arsenical compounds evolved by the art of chemistry was made with the expectation of increasing the parasite-destroying power, while at the same time the power of damaging the tissues or "organotropic action" was reduced to a minimum. More—Ehrlich had to find a substance which, while killing the parasite, should not aggravate the disease by the rapid disintegration of the slain

spirochætæ. The results achieved have justified the confidence with which he held his theory of therapeutic action, for the results of the injection of salvarsan have fully demonstrated the truth of the premisses from which he started. The mere fact that Ehrlich has not yet fully succeeded in obtaining a substance by which with one injection the *sterilisatio magna* can be effected does not disturb in the least the strength of the position; it merely shows that the success obtained has not been perfect, that the end sought has not yet been reached. The truth of the theory has been abundantly proved. To increase further the parasite-destroying power and at the same time to diminish the organotropic action is still Ehrlich's aim; he is still continuing the search, and that he will attain that for which he is searching is a matter of time. In the chemical theory of therapeutic action on which Sir William Whitla spoke so earnestly and convincingly in his oration the therapist has a firm foundation on which he can build with some confidence.

THE PREVENTION OF ACCIDENTS IN WOOLLEN AND WORSTED MILLS.

A REPORT has been issued this week by the Home Office which gives the results of the conferences which have been held during the past year between employers, operatives, and inspectors concerning the fencing of machinery and the prevention of accidents in woollen and worsted mills. The report is drawn up by Mr. James A. Hine, the superintending inspector of factories for the North-Eastern Division, which includes the busy centres of the woollen industry, Leeds, Bradford, Huddersfield, and Halifax. Agreement was reached upon many important points, while others were reserved for future discussion. The subjects discussed included: (1) fencing of machinery; (2) cleaning machinery; (3) the cleaning of the floors of factories; (4) the lighting of workrooms; (5) the lifting of heavy weights; (6) temperature; and (7) the periodical examination of machinery. In regard to general provisions, it was decided that in the clause requiring the guarding of overhead belts and ropes to omit ropes, as it was considered that a fence would prevent the detection of any frayed rope, and that a rope shows signs of deterioration, enabling repairs to be made, before it actually breaks, which a belt does not always do. In respect to women and girls having their hair put up, it was agreed by all that this was most desirable, and the employers were willing to enforce it to the best of their ability, but in the absence of statutory obligation the conference decided not to include in the formal agreements the paragraph as it appeared in the agenda. After considerable discussion it was decided to delete the clause relating to cleaning machinery by young persons. In course of the discussion it was stated by more than one employer that their present practice was to prohibit cleaning of machinery in motion by all persons, and not only by young persons and children, and that to specify young persons in an agreement would tend to weaken their position. A discussion as to adequate provisions for lighting of workrooms took place, but no decision was arrived at. In regard to the lifting of heavy weights it was agreed that no children or young person should be required to lift weights exceeding those suggested in the agenda, and this was supplemented by maximum weights for those up to the age of 16 years. In regard to temperature the only parts of woollen or worsted mills in which a high temperature is commonly found are the wool-combing sheds. There were not a sufficient number present at the conference interested in wool combing to come to any definite agreement on this point, and it was deferred for discussion later by a more representative body of employers and operatives. The suggestions made in regard to the fencing of machinery were substantially accepted for each class of machine. The agreement as to shuttle-guards was the least satisfactory in the inspector's opinion. He would have been glad if they could have agreed upon a lower speed limit than 100 picks per minute or even, as was suggested, that all looms should be provided with shuttle-guards. He adds, however, that it will be some satisfaction if it is found that accidents do not occur from shuttles flying from plain woollen looms running at a less speed than that named above, as was predicted by those who objected to any lower speed being defined. The one agreement which is regarded as most beneficial is that of the periodical examination of machinery. As the inspector observes, it is obvious that if guards for machinery are provided, it is the intention of those providing them that they should be kept in position, and if periodical examinations were made by some person told off to do this, and defects brought at once to the notice of managers of mills, the fencing would in course of time be maintained far more efficiently than has hitherto been the case. These conferences are doing good work in regard to settling questions which concern the better protection of life. We are glad to note that it is proposed that the representatives should meet again next year in order that a review may be made of the progress that has been accomplished as the outcome of the present agreements. Similar conferences have been held in regard to the prevention of accidents in cotton weaving factories, and a report has recently been issued by the Home Office which shows that a number of protective measures in this industry have been agreed upon.

PROPOSED CHANGES IN THE JURY SYSTEM.

THE Home Office Departmental Committee which has recently considered the law and practice governing the jury system has issued its report, and has not found itself able to arrive at its conclusions unanimously. More particularly has a lack of agreement shown itself in the opinions formulated by the committee on the subject of special juries. These have been declared by a minority consisting of his honour Judge Parry, Mr. Ellis Davies, M.P., and Mr. Philip Snowden, M.P., to be "a class institution which is very obnoxious to the working classes," to be hardly defended by anyone except for commercial cases, and opposed to the whole idea of the jury system. According to the opinion of the minority, with whom apparently Lord Mersey, the chairman of the committee, inwardly agrees, one class of jury drawn indiscriminately from a list including all classes would be as competent a jury as could be empanelled, and would have the supreme virtue of being free from all suspicion of class bias. Civil and criminal juries, it is added, would thus be selected from the same register. The majority report, on the other hand, makes recommendations which, if they should diminish the use of juries of all kinds, should also increase the number of those to be placed upon special jury lists. It may be noted that among its recommendations for increasing the number of jurors generally, it advises the inclusion of occupiers of flats. It further suggests that the occupiers of unfurnished flats paying between £30 and £80 per annum should be put upon the list for petty juries, and that those occupying flats at a rent of £80 per annum or over should be special jurors. With the relative capacities of special jurors, petty jurors, and judges sitting alone to try complicated commercial cases we are not concerned. The medical profession is rather interested in the capacity of the various courts before which medical witnesses are summoned to understand and weigh medical evidence. Probably the best tribunal for the reception of medical evidence, and particularly where

there is a contradiction of medical evidence, would consist of a judge sitting without a jury, but with the assistance of a highly qualified medical assessor. If, however, a jury is to be there for the determination of all facts, including those which medical evidence is called to establish, most scientific witnesses would probably expect their evidence to be better appreciated by a person selected owing to his being qualified as a special juror than by a petty juror. The case of the flats given above will illustrate our meaning. The power to pay more than £80 per annum for rent would not necessarily involve a higher degree of intelligence or education than that to be found in a man paying £50, but it would be reasonable to expect in a dozen men having the former qualification a general average of education and intelligence above that of another dozen paying the lower rental. It is possible to hold this opinion without being a snob or a plutocrat and without any class bias, and also to believe that although a jury may be, in any circumstances, very far from an ideal tribunal for the reception of scientific evidence, a special jury is, on the whole, far more likely to understand it than a petty jury, on account of the educational equipment which the power to pay the higher rent, more or less accurately if rather roughly, indicates.

THE ANNUAL REPORT OF THE INSPECTOR UNDER THE INEBRIATES ACTS FOR THE YEAR 1911.

Dr. R. W. Branthwaite's report on inebriate retreats and reformatories for the year 1911 shows that these institutions, despite the many discouraging influences against which they have to struggle, continue to do a great deal of very useful work. During the year under review 459 patients were admitted to licensed retreats, 151 being received as "patients under the Act"—i.e., by order of a justice of the peace made on the application of the inebriate, while the remaining 308 entered as private patients by simple agreement with the licensees. As usual, a large majority of the patients, upwards of 65 per cent. of the total number treated, were women. Dr. Branthwaite mentions that the absence of any provision for destitute inebriates is a very serious obstacle to the effective operation of the Inebriates Acts; every year, he states, large numbers of inebriates who are anxious to have institutional care have to be refused admission to retreats because they are unable to pay for their maintenance and treatment; and he considers that the establishment of industrial retreats for this class of patients is urgently needed. With regard to certified reformatories, it appears from the inspector's remarks that the judicial authorities continue to show a regrettable reluctance to commit habitual drunkards to these institutions. Only 339 cases were so dealt with in 1911, 30 being committed from assize courts and the rest from courts of summary jurisdiction. The inspector points out that this decrease in the number of committals has already led to the closure of several reformatories, and if it continues will no doubt compel the managers of some of the surviving institutions to follow the same course, with the result that when new legislation is enacted there will be the same lack of accommodation which was so formidable a difficulty when the Act of 1898 came into force. In this connexion, however, it is to be remarked that in all probability the great majority of the individuals who were made amenable to the operation of that Act will, in the near future, be more appropriately dealt with as mental defectives, and will not be treated in special institutions for the inebriate. In any case it is hardly a matter for surprise that the delay in legislative action with regard to this and other related questions should have reacted on the attitude of the judicial authorities, and should have discouraged them from using measures which they might well feel were of only temporary validity, and which, moreover, had the defect of being merely discretionary. Dr. Branthwaite's very interesting annual reports, if they had no other value, would have done real service in emphasising the results of this defect, and in insisting on the futility of permissive legislation in dealing with social evils.

AN OUTBREAK OF ARSENICAL POISONING DUE TO PAINT.

RECENT agitation in Sweden in favour of more stringent precautions against arsenical poisoning is largely the outcome of a serious epidemic occurring in Stockholm in a block of houses which were converted into Government offices in 1911. The epidemic which broke out soon afterwards, and which continued till early in 1913, was described by Professor Lennmalm at a meeting of the Swedish Medical Society. Of the 200 officials on the premises 143 developed symptoms of a more or less similar nature. It was noticed that those who spent six hours every day on the premises developed, within a period that can be described as from a couple of weeks to a couple of months, headaches which were at first transitory but which subsequently became continuous. The symptoms quickly ceased when the patients took a holiday. On resuming work they again suffered from headaches. Other symptoms included lassitude, giddiness, malaise, and conjunctivitis, which was both a common and obstinate complaint, being refractory to all treatment until the patient left his work. Pharyngitis, nausea, a metallic taste, anorexia, irregular action of the bowels, and diarrhœa were also observed. Sensory disturbances of the peripheral nervous system occurred as late manifestations, and consisted of sensations of tingling and pricking, of heat and cold, and of pain in the limbs. Muscular atrophy and weakness accompanied or followed these symptoms. Diseases of the skin (notably urticaria), stratification of the nails, catarrh of the respiratory passages, and cardiac symptoms were also occasionally observed. At first this outbreak was traced to neurasthenia, anæmia, or overwork. In the beginning of 1912 arsenic was suspected and found in the paint on the walls by one of the officials, who proceeded on his own initiative to replace it by arsenic-free paint. A higher official disapproved of this action and the process of renovation was stopped. It was subsequently observed that the inmates of the repainted rooms recovered their health and that the complaints of ill health were limited to the occupants of rooms where the old paint was retained. Professor Lennmalm and two chemists were appointed in the middle of 1912 by the Government to investigate the causes of the outbreak. Their examination of the patients' urine and sweat frequently revealed large quantities of arsenic. This gradually disappeared when the patients were given a holiday, and reappeared on their return to work. In some cases, however, arsenic was not demonstrable in the patients' sweat and urine. The linoleum was at first suspected of containing arsenic; but some of it contained no arsenic, and the distribution of the linoleum did not coincide with that of the outbreak. An analysis of the paint on the walls showed the presence of 648 mgm. of arsenic to the kilo., and paint scraped off 200 square cm. of the wall yielded as much as 3·948 mgm. of arsenic. Presumably for the sake of economy Dutch zinc-white had been used, which contains much more arsenic than another preparation of zinc-white, also sold in Sweden. Yet the latter, though costing more by weight, is probably the more economical of the two, for it goes further. Considerations

of economy were also apparently responsible for the combination of an equal quantity of turpentine with the oil used in the paint. Consequently it failed to dry quickly, and was still gelatinous and could be rubbed off with a finger long after it had been applied. This state of affairs was also due to the damp, ill-ventilated condition of the building, in which moulds were found in large quantities. It is, therefore, not strange that sufficient arsenical gases were set free to cause alarming symptoms. These, as is natural, were most severe in the cold seasons of the year; in the summer, when the windows were open, there were relatively few complaints. Arsenical poisoning frequently occurs in Sweden; indeed, 8 per cent. of the patients in the outbreak described had previously suffered. This is largely due to erratic legislation, stringent regulations having defeated their own ends. In view of the recent events just recorded alterations for the better may be anticipated.

THE DIETING OF PATIENTS IMMEDIATELY BEFORE GIVING ANÆSTHETICS FOR SURGICAL OPERATIONS.

THERE is nothing about which opinions have undergone more change during the past decade than about the treatment of patients antecedent to their taking a general anæsthetic. In a review of a book upon surgical after-treatment, which appears in another column (p. 1594), this important subject is briefly alluded to, but it is worth more notice than is there given, because the fluctuations of view have led to much misapprehension. Many of the recent books dealing with surgical operations are often at fault and are, in the main, quite misleading. No doubt such manuals are restricted through the exigencies of space from entering fully into a subject which is extremely wide and demands a liberal space if it is to be treated at all adequately. The well-meant attempt to condense rules and formulate a general programme of treatment results in a hazy and even inaccurate series of statements which leave in the mind of the student or inexperienced practitioner a condition of confusion worse confounded. Dealing with a very narrow aspect of the matter, the question of giving or withholding all solid and liquid food for some hours before the anæsthetisation, we find the most conflicting views advanced. The dangers of a very prolonged fast have become recognised, and some surgeons have suggested the plan of persistence in the ordinary routine of meals, but allowing an interval to elapse between the last meal and the operation sufficiently long to permit of normal digestion. This plan, however, is open to an obvious objection. An individual about to undergo an operation is usually in far from a normal state, and his digestion and metabolism are either delayed or brought to a standstill. The more commonly accepted method is to preserve the customary meal times, but to diet the patient for some days, so that as light a task as possible is imposed upon his digestion. When the question of the ingestion of liquids is considered, we find some authorities urge that even water taken immediately before the anæsthetic will delay narcosis and provoke vomiting, while others support the view that after-sickness is often lessened by pre-anæsthetic libation of water. Probably the latter view is correct, provided that a sufficiently long interval of time elapses between the drinking and the anæsthetic, especially if the fluid taken is mildly alkaline and is at blood temperature. Certainly in the case of laparotomies a system of giving hot water made mildly alkaline and taken at four-hour intervals for a week before the operation subserves two useful purposes. It lessens post-anæsthetic vomiting and obviates the distressing thirst which is often an intolerable sequela in such cases. These are some of the procedures in common vogue, but no wise practitioner will pin his faith to a routine following of any one of them. The peculiarities of each patient, and the exigencies of each operation have to be carefully weighed in deciding the method to be pursued for any given individual, and the accuracy of the judgment arrived at must depend in no small measure upon the experience and width of outlook enjoyed by the practitioner to whom is committed the ordering of the case.

SANATORIUM BENEFITS IN BIRMINGHAM.

A COMMUNICATION from our correspondent in Birmingham last week expressed, under this heading, the opinion that there was a good deal of dissatisfaction in the medical profession with the way in which the treatment of the consumptive patients was being carried out. We are informed that these words have given a wrong impression, and also that no patient is recommended for or receives tuberculin unless he has been previously examined by the tuberculosis officer or one of the full-time assistants. The tuberculosis officer is himself specially trained and experienced in this branch of medicine, and high opinions have been expressed of his work at Birmingham under the National Insurance Act.

THE PHARMACEUTICAL SOCIETY.

ON the occasion of the annual meeting of the Pharmaceutical Society, which was held on May 21st, the President, Mr. C. B. Allen, was able to give an account of a year's good work, and to show that after an existence of 72 years the society is in a stronger position than ever. The membership, which consists of 7522 registered pharmacists, is larger by 2000 than it was ten years ago, the funds are in a satisfactory condition, and "with regard to political influence," said the President, in moving the adoption of the annual report, "the council has been able, with the support of the chemists of the country as a whole, to make pharmacy felt in some quarters, feared in others, and respected on every hand." The period covered by the annual report, which was unanimously adopted by the meeting, was an anxious one, and although certain dangers which threatened pharmacists have not entirely passed away, the tension has been greatly relieved and the prospects are much brighter than they were a year ago. One cause of anxiety was the attempt made by an organised body of unqualified shopkeepers to obtain some of the privileges of pharmacists without the necessity of passing the pharmaceutical examinations. Stimulated by these non-registered persons, the Insurance Commissioners, a short time ago, appointed a committee of inquiry for the purpose of investigating the conditions under which medicines had been supplied prior to the passing of the Insurance Act, the object of those who pressed for the appointment of the committee being to secure the right to go on the chemists' panels. The report of this committee has not yet been made public, and its proceedings were private, but it may perhaps be inferred from the President's anticipation of the nature of the report that it is not unfavourable to pharmacists. He said that when the report was placed before the House of Commons registered persons would appreciate the dangers they had escaped and the means that ensured their safety. It seems that the society's witnesses before the committee had a most difficult task "to prove that neither logic nor reason could justify a policy that would condemn insured persons to have their medicines dispensed by unqualified persons who are under a legal disability created nearly 50 years ago." Another matter arising out of the Insurance Act to which the President drew attention was the

proposal to introduce into Parliament a Bill to establish an assistant dispenser's qualification. In drafting this measure it is not the intention of the council to weaken in any way the status of the pharmacist, but it has to be recognised that assistants are essential to qualified pharmacists practising on their own account; consequently it is desirable that some sort of regulation should exist to ensure that such assistants shall have had a reasonable amount of experience before being recognised as capable of dispensing medicines for a chemist on the panel. In drafting this measure the Pharmaceutical Society has consulted the General Medical Council, the War Office, and the Society of Apothecaries, and the War Office has signified a desire to coöperate in the promotion of a Bill on the lines indicated.

THE YORK HOSPITAL INQUIRY.

IN the *Hospital* of March 15th, 1913, a letter was published from two late resident medical officers to the York County Hospital containing allegations against the management of that institution. In view of the serious charges made the governors of the hospital, as was announced in our columns at the time, decided to ask the President of the Royal College of Surgeons of England to appoint a gentleman with knowledge of hospital administration and free from local influence to conduct an inquiry into the matter. Sir Cooper Perry, medical superintendent of Guy's Hospital, was nominated as commissioner, and at his request a legal assessor, Mr. Basil Watson, was appointed to assist him. The inquiry was held in public at the hospital on April 18th and 19th, and the commissioners' report has now been issued. It is evident from this report that the investigation of the circumstances was thorough and impartial. Although Sir Cooper Perry consented to assume full responsibility for the inquiry, "forming his own opinion and reporting," he notes with satisfaction that his conclusions have been concurred in by his legal assessor, and he believes that the report thus signed by both of them will carry more weight than if it had been signed independently by himself. The document deals seriatim and in a conspicuously fair manner with the various charges made by the late resident medical officers. The commissioner and assessor find some of the charges to be substantiated, while others, and these the larger number, were trivial or unproved. The general impression conveyed by the report is that, while the residents' case was overstated, they nevertheless had a case. It seems evident that things were not quite all as they should have been at the York County Hospital, but that they were not bad enough to warrant the scandal. The whole trouble illustrates in an exaggerated degree the difficulty which always exists in securing smooth working in the smaller general hospitals. Matters happily seldom come to such an acute head as they did at York; but, regrettable as it is, the full ventilation of this trouble provides certain useful lessons. From the evidence it is easy for anyone acquainted with hospital life to reconstruct the course of events, through bickerings and small slights to open warfare, and we can see how the exercise of tact and forbearance might have saved each situation as it arose and averted the final exposure. The report shows that there was room for improvement in certain respects at the York County Hospital, but it is equally clear that things were not as bad as the residents—not unnaturally anxious to make out a complete case—depicted in their published letter. The closing suggestion of the report seems to go to the root of the matter. It recommends that the residents should have the privilege of regularly appearing at the house committee with their journals, and should be at liberty to call attention to their grievances and make suggestions for improvements in the administration of the institution; they, and no less the matron, should have ready access to the chairman and members of the house committee. The concluding paragraph of the report admirably draws the lesson which is to be learnt from what has been from first to last a most unfortunate affair. "We feel convinced," say the commissioners, "that had such facilities been afforded to the late residents, whatever of ultimate good may come out of our investigations might equally well have been obtained without the trouble, annoyance, and waste of time, better spent, which this inquiry has entailed on all connected with the York County Hospital." It is impossible not to agree with this sensible summing-up and commentary.

ACCIDENTS DUE TO COMPRESSED AIR.

THE use of compressed air in industry is a comparatively recent innovation and therefore the literature of its accidents is meagre. In the *Gazette Médicale de Paris* of May 7th Dr. Jean Belle has reported the following curious accident. A girl, aged 15 years, was working in a factory near a machine which supplied a jet of compressed air. The tube accidentally penetrated her left hand and she immediately became, in the words of those who saw the accident, "inflated all over." When Dr. Belle arrived he found that there was subcutaneous emphysema of the whole of the left arm, the head, the neck, the thorax, and the abdomen. There was characteristic crepitation. The neck in particular was enormous and the head monstrous. When she made movements the air could be seen to be displaced beneath the skin. On the following day she had transient attacks of suffocation, which were attributed to pressure on the recurrent laryngeal nerve, but the emphysema was diminishing. On the third day she passed much flatus and the emphysema had completely disappeared except at the right groin and on the abdomen, where it persisted for two days longer. She was able to resume work three weeks after the accident. Dr. Belle states that, though rare, such accidents are not unknown and may prove fatal. This has occurred when, as a practical joke, a workman has directed a jet of compressed air against the anus of a comrade. The air has penetrated into the bowel and distended it to the point of rupture. In spite of laparotomy the victim has died from peritonitis. A short time ago we referred to an American case of this kind in which a boy, aged 16, was seized, and the nozzle of a compressed air tube brought against, but not inserted into, the anus outside the clothes.[1] The victim felt a sharp pain and fainted. He was immediately taken to hospital. The abdomen was extremely distended and exquisitely tender. Rupture of the bowel was diagnosed, but permission to operate could not be obtained for two hours. There was air in the peritoneal cavity, the longitudinal bands in the descending colon and sigmoid were ruptured in five places, and a perforation was found in the cæcum. The tears were sutured and recovery ensued. According to W. E. W. Andrews the mortality of such cases is 75 per cent. Recovery depends on prompt operation.

Hospital Sunday was held in London this year on May 25th, and the Metropolitan Hospital Sunday Fund has again received many generous contributions through the various places of worship and by private donations forwarded to the Mansion House. The total sum available for distribution was estimated as we go to press at about £29,000.

THE Cavendish lecture will be delivered before the West London Medico-Chirurgical Society by Sir Berkeley

[1] THE LANCET, June 22nd, 1912, p. 1704.

Moynihan on Friday, June 27th, 1913, at 8.15 P.M. precisely, in the Town Hall, Kensington. Subject: The Surgery of the Large Intestine. The reception will commence at 8 P.M.

WE regret to announce the death, after a long illness, of Mr. James Henry Targett, F.R.C.S. Eng., obstetric surgeon and joint lecturer on obstetrics at Guy's Hospital. We shall publish an obituary notice in our next issue.

IN memory of his late brother, Mr. William James, of West Dean Park, Chichester, Mr. Arthur James has announced his intention to give the income of £20,000 to the Middlesex Hospital for the purpose of cancer research.

THE GENERAL MEDICAL COUNCIL AND THE PROPOSED ALTERATION IN THE STANDARD OF PRELIMINARY EXAMINATIONS.

BY SIR HENRY MORRIS, BART., M.A., M.B. LOND., F.R.C.S. ENG.

WHEN in November, 1910, the General Medical Council, with the object of raising the standard of preliminary education, resolved on making certain changes which were to date from Jan. 1st, 1914, it was felt by some competent critics that the time for doing so was inopportune because of the falling off in the number of students entering the profession.

It may be thought, however, from the statement recently made as to an increase of 165 students registered in 1912 over the number registered in 1911, and as to the total number registered in the year 1912 coinciding with the average yearly number of the preceding five years, that this objection no longer exists.

But the increase is apparent, not real. It is due to the fact that a large number of students, owing to recently altered regulations, were enabled to register in 1912 instead of a year or so later; and when this number is discounted the real increase for the year 1912 is only 80, and the total number of entrants is considerably below the average of the previous five years, although it exceeds the total for the year 1911.

What, however, is of much greater importance than any question as to the "how" and the "when" of raising the standard of existing examinations is the urgent need of the several universities and examining bodies of the United Kingdom uniting to foster the establishment of a recognised school-leaving certificate; of a certificate which, without indicating a uniformity in kind of the education received, and without pretending to imply an exact identity of standard, will yet be a sufficient proof of a sound general education to admit the holders of it to any university, or to the curriculum of study for any professional or scientific calling.

The entrance to a university or to a profession ought not to be barred by (in the words of Huxley) "any absolute and defined preliminary examination, the passing of which shall be an essential condition of admission to the university." The instruction of a university, or that required for any professional career, ought to be accessible to everyone who is fit to take advantage of it, although he may not have been prepared at school to pass a particular "absolute and defined preliminary examination."

It is the want of a universally recognised and accepted school-leaving certificate which handicaps students and is so embarrassing to school masters. It is this want which has been, and is, the chief obstacle in the way of many an excellent and accomplished student taking a university degree which otherwise he was fully competent to do; or changing from a profession for which he finds himself unfitted, or to which he has taken a dislike, into one for which he has developed a liking and realises an aptitude. It is the difference between the educational course they have pursued and the character of the particular entrance examination which they too late discover they have to pass, and not because their education and grounding are deficient or inferior, that under present circumstances keeps the door shut against many students who are even more capable and better instructed than some of those who have been allowed to pass through the portal.

The General Medical Council could not exert its influence in a better cause than in reiterating its desire that the Board of Education and the Oxford and Cambridge School Examination Board should coöperate in getting established such a certificate; in soliciting the universities, the State, and the local authorities to take steps to standardise the different inspections by making the inspection a joint matter between them; in trying to induce the head-masters of all the secondary schools in the country to have their schools officially inspected; and in urging the various universities and licensing bodies to accept such a school-leaving certificate without requiring anything else.

Pending the establishment of such a certificate the Council, voicing as it does the whole profession, would go a long way towards bringing about compulsory inspection of secondary schools if they could induce the universities and examining bodies of England to admit as candidates for their examinations (except, perhaps, in certain special cases) those only who have been educated at inspected schools.

But were such a desirable goal reached at home it would still be advisable for the guidance of those Indian and colonial examining bodies who already are recognised, or who in future desire to be recognised by the General Medical Council, that information should be given to them as to what should be the scope, character, and standard of their preliminary examination in general education.

The revision of the existing Recommendations of the Council whereby such information is at present conveyed alike to the examining bodies at home and in India and the Colonies has occupied much of the attention of the Education Committee since November, 1910. These Recommendations, which, on the joint advice of three educational experts, were adopted by the Council in 1900 and have ever since been in force, were with "three important changes" reaffirmed in a report of the Education Committee in 1911. Two of these suggested "important changes" are (1) the increase of the percentage of marks required for the pass, and (2) the abolition of compensation between subjects. This report of the Education Committee was merely entered on the minutes of the Council.

Six months later—namely, in June, 1912—precisely the same proposals were again entered on the minutes of the Council. On neither of these occasions was the approval of the Council moved. On both occasions, on the contrary, a motion was proposed, though not carried, to refer the report back to the committee.

In the reports of 1911 and 1912 the Sections I. and II., which refer to "the character of the examination" and "the distribution of marks," are word for word the same as the Recommendations of the year 1900; whereas Section IV. as to "the Minimum Percentage of Pass" is entirely different, the pass marks then suggested being much higher than those recommended in 1900. Another important difference is that Recommendation IX. of 1900 specially provides for granting compensation when the four subjects are taken at one examination "if the candidate reach the necessary percentage in the aggregate marks of his papers as a whole, provided that the required pass mark must be reached in the English paper"; whereas the reports of 1911 and 1912 suggest that "no pass should be granted in any subject when the percentage gained in the subject is less than that which is stated in Section IV. of those reports."

Again, Section VII. of the Recommendations of 1900, which allows of each of the four subjects of certain senior examinations being passed separately, is omitted from each of the reports of the Education Committee.

Since June, 1912, the Education Committee has been engaged in obtaining the opinions of the chief examining bodies, including those of India and the colonies, on the proposals of the committee; and now after nearly 12 months' interval the committee has this week submitted a third report to the Council.

On comparing Sections I. and II. of this last report—which sections were adopted by the Council yesterday (May 30th)—with the corresponding sections of the

Recommendations of 1900, several trifling alterations, chiefly but not entirely of a verbal nature, will be found. But the most important fact to mention, and, so to speak, what has cut the entire character of Hamlet out of the "Prince of Denmark," is the rejection by the Council of the whole of the section dealing with the raising of "the Minimum Percentage of Pass in each subject."

Thus the various examining bodies, including the revised list of Indian and colonial bodies conducting examinations recommended by the committee to be accepted by the Council and mentioned in Division B of the report as having "*intimated their readiness to adopt immediately the new standard proposed*," are left with no other standard of marking but that of 1900. And as the only allusion to "the abolition of compensation between the subjects" is in the first or historical section of Division A of the adopted report, the judicious and just No. IX. of the Recommendations of 1900 obviously also remains *de facto* intact.

In a word, except for any indirect effect which the communications which have passed between the Education Committee and the various examining bodies may have upon those bodies, the decisions arrived at by the Council after two and a half years of deliberation by, and three reports from its Education Committee, give this result—namely, that, in the words of the adopted preamble, "the Recommendations adopted by the Council to indicate the scope and character to be maintained in any preliminary examination in general education for which recognition is sought [as qualifying for admission to the Students Register" are substantially and essentially those which were adopted by the Council in 1900.

The consenting examining bodies are, therefore, now in the same quandary as children who have been encouraged to hope for a box of new toys, but who, finding the new toys have been withheld, are left with nothing but the empty box and the old toys to play with.

Unless some change is agreed upon at the session of the Council in November next, the recommendations as to what should be the standard of the examination on and after Jan. 1st, 1914, will remain precisely the same as those of the last 13 years.

May 31st, 1913.

THE ROYAL INSTITUTE OF PUBLIC HEALTH.

THE PARIS MEETING.

THE section on Industrial Hygiene at the Paris Congress of the Royal Institute of Public Health carried through a good deal of important and attractive work on this subject under the presidency of Sir THOMAS OLIVER (Newcastle-on-Tyne). This section met on three days, and the committee had arranged three special subjects for discussion: (1) Lighting as a health factor in occupations and its influence on the prevention of accidents; (2) the influence of temperature in occupations; and (3) occupational fatigue. In addition, 12 papers were read upon miscellaneous subjects. All the meetings were well attended and the discussions and papers keenly followed.

Sir THOMAS OLIVER in his Presidental Address (which is printed on p. 1575 of our present issue) dealt with several questions of great importance in industrial medicine, including accidents from electric shock, the use of white lead and zinc white, and the incidence of cancer in chimney sweeps, workers in tar and pitch, as well as in aniline workers.

Lighting as a Health Factor in Occupations.

Mr. L. GASTER (London) opened the discussion on this subject, and said that light had been recognised as necessary to health from the very earliest times, and that good light, like fresh air and pure food, ventilation, and adequate sanitation, was a hygienic necessity. The medical profession agreed that abundant daylight was one of the best remedies in combating tuberculosis and other diseases. Constant work by deficient illumination impaired the eyesight of old and young, but especially of children. Mr. Gaster said that proper illumination was essential alike in the home and in the school, while in the factory it has long been recognised as having an important bearing on the efficiency of work, the comfort of the workers, and also as a means of preventing industrial accidents. Recent reports of Home Office committees and international congresses have shown how readily mishaps occur through defective illumination, and the statistics of the New York National Fidelity Insurance Company prove that most accidents occur in the winter months when artificial light is mainly used. He pointed out that it was not enough to merely have more light, but it was necessary that the light should be wisely used, and the greater brilliancy of modern illuminants and the facilities of producing strong light carry with them certain responsibilities. While there should be adequate illumination, glare should be avoided, and there should be no shadows. In new factories there should be a specification for light just the same as there is for heating, and he advocated a standard of illumination for different industries. This question was being considered by the Home Office and the French Government at the present time, and he felt sure that great improvements would be forthcoming in the near future.

Mr. S. MCMURRAY (Stoke-on-Trent) dealt with deficient light as a cause of miners' nystagmus, and said that in Scotland, where safety lamps were only used in 28 per cent. of the coal mines, this disease was much less common than in England and Wales, where safety lamps were used in 91 per cent. of the mines. The average candle power of a safety lamp was about 0·42 when tested in the laboratory, but in the working parts of the coal mine it was very much reduced. He pointed out that lack of colour and surface brightness were contributing causes, but he said that the personal factor was a great consideration. He favoured preventive measures being taken to limit the number of cases, and the most important was to increase the amount of light in the workings of the mines. Up to the present many electric lamps of excellent design had been invented, but their chief drawback was that they gave no warning of the presence of gas. If electric lamps were adopted the safety lamp must be used as well. He suggested the periodic medical examination of underground workers, so that nystagmus might be discovered in its early stages, and he saw no reason why miners who needed glasses should not wear them. In this way many accidents to the eyes would be avoided.

The Influence of Temperature in Occupations.

Professor LANGLOIS (Paris), before opening the discussion on this question, gave a demonstration at the physiological laboratory of the Faculty of Medicine to show how he conducted his experiments to ascertain the influence of temperature and humidity upon the human subject under varying conditions of work. He has an experimental chamber, and he is able to regulate both the temperature and the degree of moisture of the atmosphere by various appliances. Afterwards he pointed out the question of temperature and hygrometrical state of mine air had been extremely important on account of the efforts made with a view of suppressing dust in mines and so avoiding accidents similar to that of Courrières. Watering the mines had been suggested with a view of dealing with the dust, but in warm mines the working conditions would become very difficult on account of saturation of the atmosphere with moisture. He gave the results of his experiments in the chamber, the temperature of which might be raised to 113° F., the hygrometric state to 90 per cent., and the velocity of the air to nearly 20 feet per second, and the subjects upon whom he took observations worked on a stationary bicycle fitted with a Prony brake. In a medium exceeding 77° F. on the wet bulb thermometer ventilation exercises a sensible influence on the organism, but at 86° F. the subject, even resting, is very uncomfortable. Above 77° F. work in a non-ventilated medium results in a rise of temperature of the subject to 100°–101° F. At 77° F. (wet bulb) without ventilation the water loss amounted to 18 oz., and with ventilation it was 48 oz.

Professor CADMAN (Birmingham) spoke of the underground temperature of coal mines in relation to the working capacity of the miner, and quoted figures from observations made in mines in different parts of Great Britain to show a variation in the temperature of mine air increasing with the depth, but not consistent with the temperature obtained from direct readings of rock temperatures. He plotted out a curve which showed that the *average* atmosphere temperature gradient of mines in Great Britain works out to about

100 feet to 1° F. Readings with the wet-bulb thermometer showed that at depths exceeding 2000 feet the atmosphere becomes drier, and the wet-bulb gradient in consequence is much greater. He said that the factors which influenced the temperature of mine air were increase of rock temperature due to depth, the rate of oxidation, the increase due to compression of air in the shafts, and the cooling effect due to taking up moisture. He was convinced that the capacity of a man for work was seriously impaired when the wet-bulb temperature exceeds 82° F., although this figure may be exceeded if a strong breeze is made to blow over the exposed skin surface of the miner, but 85° F. (wet bulb) must be taken as the limit. To obtain proper working conditions Professor Cadman said that large volumes of air must be circulated through the main arteries of the mine to be delivered in the workings in a dry condition and at a temperature below 82° F. (wet bulb). No artificial watering for the purpose of allaying dust should be used, and the air must be carried in roadways which permit of the minimum amount of loss of oxygen due to oxidation. The length of coal face ventilated by a single air current must be so restricted as to prevent an abnormal increase in temperature due to oxidation. Brisk currents of air must also be projected into the places where men are employed. By adopting these precautions there should be no difficulty in successfully working to a depth of 5000 feet.

Occupational Fatigue.

Sir THOMAS OLIVER, in introducing the subject, said that "so tired" was the cry of thousands of men, women, and children at the end of a working day, and how to meet the complaint and remove its cause was one of the problems of the present age. He said that it would seem that the stress of modern times was becoming too great and that the strain of industrial methods through improved machinery was becoming more than human strength could bear. Fatigue is due to altered industrial methods, changes in the food of the people, overcrowding, and other conditions incidental to town life. The greater prevalence of functional disease lends support to the supposition that men and women are more readily overcome by fatigue than were our forebears. In factories, where the working day is unduly protracted, not only are accidents more numerous but the actual production of the last hour or two is much below the average. Night work for women and children is a frequent cause of fatigue and the employment of young persons in arduous processes requiring the lifting and carrying of heavy weights beyond their strength and years is not only a cause of fatigue but of arrested physical development. Sir Thomas Oliver then proceeded to deal with long hours and overtime, working in continuous processes, the influence of alcohol, noise, and a dusty atmosphere, as well as poverty, as causes of fatigue. In the spinning department of a large cotton mill in Lancashire, which he had visited three months ago, he found men working at a temperature of 84° F. and superintending 1360 spindles. The men were constantly traversing the floor between the machines and there did not appear to be a minute to rest. The severity of strain in this employment was so great that after 60 years of age workmen could not be kept in that department and other work had to be found for them. A glance at the industrial progress of the second half of last century shows that, while the actual physical burden imposed upon workers has in many instances been lightened, the greater use of labour-saving machinery has not only induced a degree of eyestrain and of muscular monotony, but has necessitated a fixation of mental attention far beyond anything hitherto required.

Dr. F. SHUFFLEBOTHAM (Newcastle-under-Lyme) said that occupational fatigue was of the greatest importance, not only from a medical but also from an economic point of view, and these two aspects should be considered side by side. The tendency of modern industry was not only to accelerate the processes of manufacture, but also to speed up the human machine, with the result that fatigue was one of the principal causes of both industrial diseases and accidents. He then spoke of the influence of home surroundings and personal habits as factors in the production of fatigue, and said that small and crowded rooms, badly lighted and ventilated, with unsatisfactory sanitary arrangements, easily conduced to fatigue, while excess of alcohol and tobacco produced the same result. He referred to the distance at which some workers lived from their work. In some parts of England miners live six, seven, and even eight miles from the mine at which they are employed, and it is easy to understand that travelling such a distance twice a day in addition to the daily work, even though it be on a bicycle, is a frequent cause of fatigue and in the course of time premature old age. Miners who spend their leisure time in gardening are said to be affected in the same way, and in certain districts in Belgium where gardens have been attached to the miners' cottages it has been found that the output of coal per man has been considerably reduced, although the working hours have been the same. Dr. Shufflebotham then spoke of the influence of high temperatures, and said that the new Home Office regulations with regard to the pottery industry fixed 125° F. as the maximum temperature at which potters' ovens should be drawn, and in view of the laborious work of the men so employed he thought it was too high. This work was conducted, however, in a dry heat, and experienced workmen did not appear to be affected so much as those who commenced this kind of employment. From a pathological point of view fatigue showed itself in two ways, either as arterio-sclerosis in some form or other or else in such nervous diseases as writers' cramp or miners' nystagmus, both of which could be directly attributable to fatigue.

Dr. W. F. DEARDEN (Manchester) said that a moist atmosphere was undoubtedly essential to successful weaving in the cotton trade, and that the maximum temperature for weaving-sheds was by law 65° F. when taken with a wet bulb thermometer. He specially referred to the fatigue produced among female operatives in Lancashire engaged in working at a sewing-machine driven by electricity. This is a comparatively new industry, but one which is fast increasing, and he said that observations should be made upon the workgirls to find out to what extent they were affected by their employment. Dr. Dearden recommended that a medical examination be made of boys before their employment in mines, so that those unfit for the work of mining should be eliminated from the outset.

Fustian-cutting and Health.

Dr. J. FORTUNE (Newcastle-under-Lyme) read an exhaustive and interesting paper upon the above subject. He said that fustian-cutting was a growing industry, and in Lancashire, Cheshire, and North Staffordshire about 12,000 people were employed in this way. In many mills the work is entirely done by female labour, and he said it was almost unique in its demands on the locomotive powers, the average daily distance which an operative walks being from 15 to 24 miles. The majority of female workers work 10½ hours per day, but as the work is paid by piecework they rest when they like; and as it is purely manual work there is no mental strain involved, as there is in operatives who are responsible for the effective running of machinery. Dr. Fortune said that he had been unable to find any cases of phthisis among this class of workers, and he explains this result to the fact that the physical conditions of the work have a weeding-out influence. He made a systematic examination of all the workers in 22 mills, and found that, generally speaking, the operatives were exceptionally healthy. He had expected to find varicose veins, flat feet, and muscular cramp of the right forearm, but these preconceived ideas were entirely upset. Constipation was uncommon, and anæmia rare. The pulse-rate was observed under varying conditions, and he found that 55 per cent. of the female workers between the ages of 13 and 17 had a pulse-rate of over 100, but with advancing age the pulse-rate became lower. He thought that the quickened pulse-rate in young girls was due to the fact that they walked quicker than the older workers.

ROYAL SANITARY INSTITUTE.—The annual report shows satisfactory progress and development in the institute's work both in England and other parts of the Empire. A new branch has been established in New Zealand, and the total members and associates on the roll of the institute amount to 4257. An epitome of the three years' work since the institute was established in its new premises in Buckingham Palace-road is appended to the report, and shows that the change of premises was in every way satisfactory. The new buildings have been paid for out of the accumulated fund, and the growth in the income has more than overtaken the increased expenses involved by the larger buildings.

THE FINAL REPORT OF THE ROYAL COMMISSION ON UNIVERSITY EDUCATION IN LONDON.

VII.[1]

Summary of Recommendations.

PART V. of the Report is an admirable summary of the various recommendations made by the Commissioners as to the constitution and conduct of the University. They recommend the King in Council to continue to be the Visitor of the University. The Chancellor is to be an *ex-officio* member of the Court, the Senate, and the Convocation, and the chairman of the two former bodies. He is to be appointed by Convocation and to hold office for life. The Vice-Chancellor is to be a permanent salaried official appointed by the Senate, and to be chief administrative officer of the University. The deans of the faculties are to be appointed for a period of years by their respective faculties and to be *ex-officio* members of the Academic Council and of the Court.

The Court.—The Court is to consist of the Chancellor, the Vice-Chancellor, the other members of the Senate, the Deans of the Faculties, and other members, and will number in all about 200. It is to be the supreme governing body, and to have the powers and authority of the University not otherwise provided for. In particular the Court will have the following powers:

(*a*) To make statutes, either on its own initiative or on the proposal of the Senate, and to pass resolutions subject to the existing statutes of the University.
(*b*) To confer all honorary degrees at meetings which should be specially called for the purpose, and for which a special quorum may be prescribed.
(*c*) By statute to increase or diminish the number of its members, by increasing or diminishing the number to be appointed by the persons or bodies possessing the right of nomination or appointment, or by adding representatives of other bodies, or in any other manner.
(*d*) To approve of the admission of constituent colleges or university departments on the recommendation of the Senate.
(*e*) To approve of the recognition of public educational institutions or departments of such institutions as schools of the University on the recommendation of the Senate.
(*f*) To institute any new degree, diploma, or certificate.
(*g*) To decide any matter referred to it by appeal from the Senate in cases where a minority of not less than five of that body support a recommendation of the Academic Council.

The Senate.—The Senate is to consist of the Chancellor, the Vice-Chancellor, the Chairman of Convocation, and 12 other persons appointed as follows: Five by the Crown for six years, two by the Court for six years (of whom the original two will be appointed by the Statutory Commission), two members of the Academic Council appointed triennially by that Council, two persons appointed by the London County Council, and one person appointed triennially by the Corporation of the City of London. Special provision is made with regard to retirement, so as to secure continuity of administration. The Senate is to be the executive body of the University, and will have the custody and use of the Common Seal, the management and administration of the whole revenue and property of the University, and (except as otherwise provided) the conduct of all the affairs of the University. The Senate will, in addition to all other powers, have the following: To draft statutes for submission to the Court. To appoint the Vice-Chancellor. To appoint and to prescribe the powers and duties of delegacies for the management of constituent colleges and university departments, subject to any provisions of Acts or charters concerning such delegacies. To determine by regulation or otherwise all matters relating to the quorum required at meetings; the finance, investments, and accounts of the University; the payment of fees; the duties and powers of the Academic Council and Faculties, advisory and other boards, save where otherwise provided for; qualifications for honorary degrees; visitation of constituent colleges; terms and mode of appointment of officers and tenure of office of assessors and examiners; provision and tenure of fellowships, scholarships, &c.; matters of discipline; extension of university teaching; provision of premises; granting of degrees; and appointment of representatives of various bodies.

The Academic Council.—The Academic Council will consist of the Vice-Chancellor, who will preside, the Deans of the Faculties for the time being, one teacher appointed by the Senate to represent each group of studies in respect of which schools of the University have been recognised but for which no faculty has yet been constituted, and eight members of the faculties elected by the faculties in common session. The Academic Council is to have power to advise the Senate upon the following matters: General directions to the faculties; the establishment or admission of constituent colleges and university departments, and the recognition of institutions; the nomination of boards of advisors and the appointment of professors, readers, &c.; all matters concerning research or scholarships; the conferring of honorary degrees and the institution of certificates or diplomas; the appointment of representatives of the University on governing bodies, and of delegates to represent the University at academic celebrations; and generally upon any action that the Senate may propose to take having a direct bearing on the education and work of the University as a whole.

The Convocation.—The Convocation of the University is to have its present constitution and powers as defined in Statutes 40 to 58 inclusive, except that all university professors and university readers, honorary and associate professors, and honorary and associate readers, and all persons upon whom the Court may confer an honorary or *ad eundem* degree will be entitled to be registered as members of Convocation.

The Students' Representative Council.—The Students' Representative Council, consisting of and elected by registered undergraduate and graduate students, is to be one of the constituent bodies of the University to which the University may make an annual grant out of its general funds. In addition to appointing two representatives on the Court the Students' Representative Council will, under the Statutes, have the right of access to the University authorities by petition with regard to any matter affecting the teaching and discipline of the University or otherwise affecting the interests of the students.

The Faculties.—Each faculty of the University is to have the following constitution, powers, and duties, according to the recommendations:—

(i.) It will consist, either wholly or in the main, of the University professors (including honorary and associate professors) of the subjects comprised within the faculty; of the University readers (including honorary and associate readers) in subjects for which the University has not provided professorships; and of such other teachers and officers appointed by the University as the faculty may co-opt. The Vice-Chancellor will, *ex officio*, be a member of every faculty.
(ii.) It will have the power of appointing committees consisting of members of the faculty, or of members of the faculty together with other persons. Such committees will be appointed to act as boards of studies, and for other purposes, and the faculty will be able to delegate to a committee such of its own powers as it may think fit, and to empower any committee to delegate any of its powers to a subcommittee of its own members. Two or more faculties will have power to appoint joint committees, and each faculty will have power to appoint committees jointly with other bodies.
(iii.) It will have the power to determine generally the conditions for the award of degrees, diplomas, and other distinctions within the purview of the faculty.
(iv.) It will have the power to determine generally the course of study to be pursued by students of the University in the subjects within the faculty.
(v.) It will be responsible for the conduct of the examinations of students in constituent colleges and university departments of the faculty.
(vi.) It will present to the Senate all candidates for the award of degrees, diplomas, and other distinctions within the purview of the faculty.
(vii.) It will consider and advise the Senate as to the needs of the faculty and as to the provision and organisation of the teaching within it.

In particular each faculty will also decide which subjects for the degrees are to be compulsory and which optional, the normal amount of time to be given to each subject, what is to be the length of the full course for the several degrees, subject to the minimum for each faculty which may be imposed by the Senate, and, in general terms, the standard of knowledge required. But this it is to do by indicating the range of study in some way or other than by means of a detailed syllabus, for this is to be left to the professor in consultation with his colleagues in the same branch of learning. The faculty will also decide how far written, oral, and practical examinations shall respectively be employed as tests, as well as how far the record of work done by the student shall be taken into account with, or in place of, his position by examination. It will consider and endorse passlists, appoint assessors in the conduct of examinations, and

[1] Nos. I., II., III., IV., V., and VI. were published in THE LANCET of April 26th (p. 1184), and May 3rd (p. 1251), 10th (p. 1336), 17th (p. 1410), 24th (p. 1480), and 31st (p. 1560), 1913, respectively.

decide if occasion arises all differences of opinion between the head of a department and such assessors.

Constituent Colleges and University Departments.—The constituent colleges are to be educational institutions, either established by the University or strong enough in one faculty or more faculties to comply with the conditions for incorporation, and which transfer to the University the financial and educational control of their work in those faculties. A constituent college must be able to provide a full course for the first and higher degrees awarded in its faculty. The university departments will be departments dealing with a single subject of study, or with a group of studies of less range than a faculty, whether established by the University or placed under its financial and educational control. Each constituent college or university department is to be managed by a delegacy similar to those already appointed for University and King's Colleges, and will have a departmental organisation according to subjects of study. The head of each department will be either a professor or a reader. Classes and laboratory work will be confined to students of the University, and other students, though admitted to the general lectures, must be provided for separately. Royal scholarships and free studentships, tenable at the Imperial College, are to be confined to candidates qualified as undergraduates of the University.

The following is the Commissioners' summary of their recommendations in respect of the

Faculty of Medicine.

A Faculty of Medicine will be constituted when funds are available for the appointment of the necessary professors and readers, and when the University obtains financial and educational control of one or more medical schools attached to a general hospital.

In addition to the regular members of the faculty a certain number of members of the medical profession who are not teachers of the University may be appointed to the faculty. The number and mode of selection will be decided from time to time by the Senate.

The professors of subjects involving clinical instruction will be appointed under the same regulations as to personal qualifications and conditions of employment as other professors of the University, but will be allowed a limited amount of private practice.

A special form of organisation known as the "hospital unit" will be required in the case of clinical subjects in order to secure the coöperation necessary for the treatment of the patients, the training of the students, and the advancement of medical science.

The preliminary sciences of physics, chemistry, and biology will form no part of the University curriculum in the Faculty of Medicine. In the normal case they will be taken as special subjects in the last two years of a secondary school course and be included in the higher school examination. When they have not been taken at school, either because the school did not provide teaching of the right standard or because the course of the pupil's education had followed other lines, the instruction will be given in the science laboratories of the University or in institutions recognised by the University for the purpose, but the students will not be admitted to the Faculty of Medicine till they have passed a general examination in these subjects.

The intermediate sciences of anatomy, physiology, and pharmacology, as well as the advanced medical science of pathology—including morbid anatomy and histology, bacteriology and bio-chemistry—will be provided for in as close proximity as possible to the hospitals in which the clinical teaching is given.

The subjects of public health and forensic medicine will not necessarily be so closely connected with the Hospital Medical College; but the department of forensic medicine will, if possible, be brought into relation with the police and the coroners.

Special clinics in separate hospitals will be established when funds are available, and in particular a clinic of psychiatry and mental diseases will, if possible, be established in connexion with the new hospital for mental diseases at Denmark Hill.

One of the University medical colleges, when established, will include a department of dental surgery, and the University should consider whether it ought not to grant a first degree in dentistry to students trained in that department.

The estimated income required to organise a hospital medical college on university lines, in addition to fees and Board of Education grants, is £12,000; and three medical colleges will be necessary in order to provide for the instruction of the present number of university students, including those from Oxford and Cambridge.

The First Constituent Colleges and University Departments.

The following are recommended as the first constituent colleges and university departments, subject to the fulfilment in each case of certain conditions and in respect of certain faculties: The Imperial College of Science and Technology, the London School of Economics, University College, King's College, King's College for Women, Bedford College, London Day Training College, Royal Veterinary College, and Brown Animal Sanatory Institution.

Additional Income Needed.

In order to qualify the foregoing constituent colleges and university departments to take their place within the University, to establish an evening constituent college in the Faculties of Arts and Science at the Birkbeck College, to establish a University Department of Oriental Studies at the London Institution, and to maintain three constituent colleges in medicine attached to hospitals (as recommended above), the University will need additional income for—(*a*) professorships, readerships, and the maintenance of libraries and laboratories amounting to £85,500; and (*b*) reduction of fees to University students to £15 per annum for arts, £20 per annum for science, £30 per annum for technology—£13,500—making a total further income needed of £99,000 a year.

Area of the University for Constituent Colleges and University Departments.

The area of the University for the admission of constituent colleges and university departments is recommended to be that of the Administrative County of London, although the Commissioners look favourably upon certain logical extensions of that area suggested by Mr. Sidney Webb.

Site of University Quarter and Central University Buildings.

The constituent colleges and university departments of the University are to be concentrated as far as possible in Bloomsbury, and to this end King's College, and if possible the University Department of Household and Social Science and the Brown Animal Sanatory Institution, should be moved to Bloomsbury. The central University buildings, also in Bloomsbury, will include—(*a*) A great hall for University ceremonies and large educational gatherings. (*b*) Accommodation for the Senate, for committees, for the principal, and for the headquarters staff. (*c*) Accommodation for the meetings of Convocation and for its officers. (*d*) A club-house for the union societies, headquarters for the Officers' Training Corps, and rooms for professors, graduates, and students. (*e*) A central university library supplementing the libraries in the constituent colleges, university departments, and schools. Examination halls, in so far as they are required, are to be built in some accessible part of London where land is cheaper than in Bloomsbury.

Schools of the University.

Those public educational institutions or groups of departments in larger educational institutions which are not under the educational and financial control of the University will be schools of the University in compliance with the necessary conditions. In the case of a hospital medical school the governing body is to appoint a committee of its own members, with the addition of University representatives and representatives of the teachers to conduct the business, and to this committee a board of teachers is to report. For every hospital medical school there is to be a group of teachers, each qualified by his attainments, his remuneration, and the conditions of his work, for university teaching and for the work entrusted to him; and the group must be collectively adequate to give instruction covering all the non-clinical subjects of the course for a degree in medicine which fall within the purview of the school. In the case of schools which have transferred the teaching of the intermediate subjects to the University, only the later non-clinical subjects for which the school is responsible will fall within their purview.

All institutions to be connected with the University (other than constituent colleges and university departments) will be schools of the University, and the present system of recognising teachers in institutions otherwise unconnected with the University will cease. Thus the teaching of mental diseases to university students in medical schools, not being constituent colleges, will be given by men who have received appointments in the medical school itself, and not by teachers individually recognised by the University at institutions which are not schools of the University. The statutory distinction between internal and external students will disappear, but a student graduating from a constituent college will place the name of his college after his degree, and a student graduating from a school that of his school.

The following institutions which are at present schools of the University will be the first schools in medicine of the reconstituted University, provided they comply with the foregoing conditions:—The Medical School of St. Bartholomew's Hospital, the Medical College of the London Hospital, the Medical School of Guy's Hospital, the Medical School of St. Thomas's Hospital, the Medical School of St. George's Hospital, the Medical School of King's College Hospital, the Medical School of the Middlesex Hospital, the Medical School of St. Mary's Hospital, the Medical School of Charing

Cross Hospital, the Medical School of the Westminster Hospital, the Medical School of University College Hospital, the Medical School of the London (Royal Free Hospital) School of Medicine for Women, the Royal Army Medical College, and the London School of Tropical Medicine.

The Housing of the University.

A fourth report, in the form of an appendix, fully signed, deals with the housing of the University. It recommends strongly, on national and educational grounds, the erection of permanent and appropriate buildings, comprising a great hall and accommodation for the Senate, for committees, for the principal, and the headquarters staff. The Commissioners also point out the need for provision for the meetings of Convocation and its officers, and for the development of social and corporate life among the undergraduates. Headquarters are required for the Officers' Training Corps, and rooms for professors, graduates, and students, while a club house is needed for the various societies. Later, provision will also have to be made for laboratories for advanced work and for a university library.

MEDICINE AND THE LAW.

An Action on a Restrictive Clause in an Agreement with an Assistant.

IN the action of Eastes *v.* Russ recently tried by Mr. Justice Sargant in the Chancery Division the important questions submitted to his lordship for decision arose as follows. Dr. G. L. Eastes, the plaintiff, engaged Dr. C. Russ, the defendant, to assist him in carrying on a laboratory of pathology and public health at 62, Queen Anne-street, W. The plaintiff had before employed one qualified assistant and four unqualified assistants, and upon the defendant replying to his advertisement for a second qualified assistant he sent him a document containing the terms upon which the proposed post was offered. Those terms the defendant accepted after some discussion as to one of them, but not as to the one which formed the subject of litigation. No agreement between the plaintiff and defendant was signed by either of them, but the terms referred to were treated in the action as having been adopted, without any objection as to this being raised by the defendant, the learned judge complimenting both sides as to the fair and reasonable manner in which the litigation had been conducted by them. Clause 12 of the terms referred to ran as follows: "The candidate selected will be required to enter into a bond not to engage in similar work within a distance of 10 miles from these laboratories, either for himself or on behalf of any other institution of a like character, under a penalty of £250." Clause 13 rendered the acceptance of the post equivalent to an agreement accepting the other conditions offered, but, as has been mentioned, no document such as the bond referred to was ever signed. The litigation arose out of the action of the defendant, who after being dismissed by the plaintiff set up a laboratory of a similar character to the one in which he had been employed in Beaumont-street, W. (i.e., at a place within a mile of Queen Anne-street). The plaintiff did not allege any canvassing of his clients by the defendant, and there was no suggestion of any impropriety of such a nature, but he asked for an injunction to restrain the defendant from carrying on any similar work to his own within a distance of 10 miles from his laboratory. Three defences were raised to this. 1. That upon the true construction of the clause quoted the obligation contained in it was only to continue during the term of the employment. 2. That if this should not be the true construction the term in question was so ambiguously expressed and so differently understood by the plaintiff and by the defendant that there was either no consensus at all, or not such a consensus as the court would enforce by decree of specific performance. 3. That the term laid down was void or unenforceable as being a condition in restraint of trade wider and more far reaching than was required for the reasonable protection of the plaintiff. The learned judge dealt with the third defence first with a view to a possible appeal from his judgment, although strictly it was not necessary to do so owing to his decision upon the other two points. He was of the opinion that the condition quoted did not go beyond what was necessary for the reasonable protection of the plaintiff. He took into account evidence that a very large number of the plaintiff's clients sent him material for examination or came with patients from within the 10-mile limit prescribed and a good many from just outside it. He took into consideration the close relations into which the defendant was brought with his employer's clients, and expressed himself satisfied that he could not set up within the area laid down without competing to a considerable extent with the plaintiff. With regard to the increasing demand for work of the kind done by the plaintiff it had been argued that there would be enough for both, but Mr. Justice Sargant pointed out that it was open to the plaintiff to enlarge his establishment in proportion to any increase of demand for his services. The point had been taken that the clause as interpreted by the plaintiff would restrain the defendant for life from competing within the prescribed area, but no case had been cited in which the mere fact that the period was for the life of the defendant had been held to render unreasonable an otherwise reasonable restriction. Turning, however, to question 1, Mr. Justice Sargant came to a conclusion in favour of the defendant as to the construction of the agreement. All the other obligations imposed were co-extensive with the employment. It had been argued that they were necessarily so because they referred to the dealings of the plaintiff and defendant *inter se*, but this, his lordship considered, did not dispose of the matter. The words of the condition quoted above seemed to him to be at least fully satisfied by the imposition on the defendant of an obligation not to compete with the defendant when employed by him, and to hold otherwise would be to fetter a man with a restriction for life rather than to put a reasonable construction upon the document. It had been argued that competition during the period of employment was not possible, so that it would not have been provided against, but this was disposed of by evidence that the defendant did in fact do work of his own during hours when he was not employed upon that of the plaintiff. His lordship therefore held as to this that the obligation was co-extensive with the period of employment and did not apply after its termination. The decision thus given as to point 1 rendered unnecessary, to speak strictly, the decision of point 2, but his lordship went on to say that in any case he should have been in the defendant's favour as to this. He pointed out that he had himself come at once to a conclusion in favour of the defendant's interpretation of the condition in question, and that therefore whether this was right or wrong it was not at any rate an unreasonable interpretation. The ambiguity was introduced by the plaintiff, no doubt unconsciously, but nevertheless the court would not decree specific performance in such a case. According to Falck *v.* Williams (1900, Appeal Cases, p. 176), and more particularly in accordance with the judgment delivered in that case by Lord Macnaghten, such a case was not one either in which damages would be recoverable at law. (This referred to the question whether, even though there might be no injunction, the plaintiff would be entitled to the penalty referred to in the condition.) In conclusion, his lordship, while expressing sympathy with the plaintiff in any hardship that his decision might inflict upon him, observed that he was glad to have arrived at it, as it would be a monstrous thing that a man should be deprived for the whole of his life from carrying on work which was the principal work of his life unless that obligation were put before him in definite and clear terms. He accordingly gave judgment dismissing the action with costs. In comment it is not necessary to say more than that whatever the plaintiff may have meant, and the defendant may have understood on the occasion in question, it was essentially one for the clear expression of the considered intention of both parties. It was also one of those occasions upon which the intervention of a solicitor would not be amiss or in which recourse might be had to precedents settled by a lawyer. A restrictive clause[1] such as that which Dr. Eastes intended to impose usually bars expressly competition both during and after employment, the restriction after employment being limited to a specified number of years. Such a clause can be so framed that misunderstanding is impossible, and the

[1] Reference may be made to Medical Partnerships, Transfers, and Assistantships, by Barnard and Stocker, reviewed in THE LANCET, May 31st, p. 1533.

person who is asked to be bound by it can reject or accept it as he pleases.

A Garnishee Order in Respect of Medical Fees under the National Insurance Act.

An important legal question affecting medical men upon panels under the Insurance Act was recently raised at the Lambeth county court before his honour Judge Parry, who delivered a considered judgment. The matter arose out of the indebtedness of a medical practitioner to the plaintiff under an order for costs made recently against him in the High Court. The defendant being on the panel under the Insurance Act, was owed by the London Insurance Committee £33 for his services to insured patients. The plaintiff obtained a "garnishee" order under which the above sum was paid into the county court and a summons issued against the defendant, calling upon him to show cause why the money should not be paid out to the plaintiff. It may be mentioned that a garnishee order is in effect a warning to a person who owes money to another not to pay it over to him because it is claimed by the person who takes out the garnishee order. The money is then said to be "garnisheed," or, by old-fashioned lawyers, "garnished," and the court takes charge of it, thus relieving the person who has it of the risk of paying it to the wrong person, in which event he might have to make it good to the right one. The novelty of the case as arising out of the Insurance Act was due no doubt to the obvious practical impossibility of garnishing fees paid, perhaps in very small sums, by a large number of patients to a medical practitioner. When the money is collected in one amount in the hands of an Insurance Committee the position is at once altered. The serious importance of the matter to a medical man whose patients may be wholly, or nearly so, insured persons arises out of the possibility that he may be deprived all at once of his income for a considerable period, in respect of a debt which otherwise he may arrange to pay by instalments. The question of the power to arrest a medical man's fees under the Insurance Act was at once raised by Judge Parry on the application to pay out the money in court being made before him, and he showed a sympathetic appreciation towards the possible hardships arising in such a matter throughout the argument, referring to the medical man's work under the Act as a public service which could only be rendered by one having the money to buy the necessaries of life. There was not, however, apparently any authority against the employment of the garnishee order in the circumstances described, and the learned county court judge adjourned the case after hearing argument in order that he might give the point further consideration. At a later date, in delivering his judgment, he said that the cases decided in the High Court laid down that a county court judge had full discretion as to the course that he should adopt in making an order for the payment of money out of court upon such an application as that before him. It was his duty to "temper the wind to the shorn lamb." He, therefore, proposed to follow the course that he was in the habit of following in making orders against judgment debtors. Upon this it was stated on behalf of the plaintiff that the defendant had 833 patients on his list, and, on the other hand, the defendant protested that he had no other patients from whom he could derive fees. His honour, in conclusion, made an order for the payment of £10 with costs to the plaintiff, the balance to be paid to the defendant. The point is one of interest to creditors and debtors, and the result of its submission to High Court, if the appeal takes place, will be awaited with interest.

ASYLUM WORKERS' ASSOCIATION.—This association, the objects of which are to raise the status of asylum workers and to help them in times of need, held its annual meeting in the rooms of the Medical Society, Chandos-street, London, W., on May 28th. Sir John Jardine, M.P., presided. The annual report showed, for the first time in several years, a falling off in membership, though it is hoped that this backward movement is only a temporary one. Of life, associate, and ordinary members there were 5860 in 1911, as compared with 4310 in 1912, the ordinary members for the same years being 5309 and 3712 respectively. At the end of 1912 there was a balance of £155 to the credit of the association, the total receipts for the year being £618.

THE SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE (1913).

INTERPRETERS WANTED.

IT is hoped that members of the Congress who speak foreign languages will be willing to wear a small badge denoting the language or languages which they can speak. Such an arrangement will be a great convenience to foreign visitors, and it is requested that those who will thus act as voluntary interpreters will communicate with the general secretary, 40, Wimpole-street, W. He will be very grateful for their assistance.

SECTION OF RADIOLOGY.

This is the first time there has been a Section of Radiology included in the International Congress of Medicine, and every effort is being made to show that the advance in this branch of medical science fully justifies the formation of a separate section.

The section, of which Sir James Mackenzie Davidson is President, deals with X ray work in all its branches and with radium therapy, but does not include electrotherapeutics. This subject is dealt with, as before, under the heading of Physiotherapy, a subsection of the Section of Therapeutics. Some little irritation is apparently felt on the continent at the non-inclusion of electrotherapeutics. The formation of a separate Section of Radiology has, however, been entirely due to the energetic action of radiologists. There has been no special effort on the part of electrotherapeutists either to obtain a section for themselves or to be included in the Section of Radiology until too late, and therefore it behoves workers in this branch of medicine to see that they are more adequately represented at the next Congress.

With regard to the programme, the mornings are to be devoted to discussions of special interest and the afternoons to the reading of papers. A good lecture theatre has been secured in the new School of Mines at South Kensington, which can be completely darkened, and will be provided with a lantern for the demonstration of lantern slides; provision will also be made for the illumination of original negatives where this is considered necessary. In the museum a room will be set aside for the exhibition of transparencies, and adjoining this there will be a continuation of the department of radiology, in which apparatus, skiagrams, and other daylight exhibits can be shown. Members wishing to exhibit should communicate direct with Mr. H. W. Armit, honorary secretary of the Museum Committee.

The following is the list of the discussions, together with the reporters selected for each: The Radiography of the Stomach and Intestines (Dr. Holzknecht and Dr. Leonard); that of the Chest (Dr. Hugh Walsham and Professor Wenckebach); the Radiotherapy of Malignant Disease (Dr. Abbé and Dr. Kienböck); Roentgen and Radium Therapy in Gynæcology, a joint discussion with the Section of Obstetrics and Gynæcology (Dr. Albers-Schönberg, Dr. Foveau de Courmelles, and Professor Krönig); the Radiography of Bones and Joints and its Value in Orthopædic Surgery, another joint discussion, this time with the Subsection of Orthopædics (Dr. Fedor Haenisch, Dr. Nové-Josserand, and Dr. P. Redard).

Many offers of papers have been received, but the final selection of these has not yet been made. Preference will be given to papers received before April 30th, and no paper can be considered unless the title has been received by the secretary before July 1st. Any members wishing to read papers, who have not yet made application, should communicate at once with Dr. G. Harrison Orton, honorary secretary, 67, Upper Berkeley-street, Portman-square, London, W.

Everything possible is being done in the direction of the entertainment of foreign guests. A dinner will be held probably on August 8th, to which members may bring their lady friends, and the Electrotherapeutic Section of the Royal Society of Medicine and the Roentgen Society are arranging jointly to get up an entertainment to take place after the dinner. A committee of ladies has been formed to look after the interests and make arrangements for the entertainment of foreign ladies, but the final arrangements are at present necessarily incomplete.

Public Health.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Enteric Fever at Strood, in the Rochester Borough, by Dr. S. W. WHEATON.[1]—This report deals with the causation of 69 cases of enteric fever notified in the borough of Rochester during the summer of 1912. The borough is divided by the river Medway into the ancient city of Rochester on the south and the modern town of Strood on the north, the latter contributing some 13,500 out of a total population of about 31,500. With two exceptions all the notified cases occurred in Strood; the first was reported on August 2nd; 26 cases followed in the week ending August 10th, and 21 cases in the following week. Cases in relatively small numbers were reported during the succeeding six weeks, after which the epidemic came to an end. Eight cases were fatal. Those attacked belonged principally to the working classes; 33 were males and 36 females; 29 were under and 40 over 15 years of age. Dr. Wheaton found that on marking the position of the invaded houses on a spot map of the district they could not well have been more scattered all over Strood than they were, nor could the enteric fever have been more widely distributed in that area. The sufferers were served by eight milk-supplies, some of which were also distributed in Rochester; quite half the persons attacked had condensed milk only, so that it seemed very improbable that milk was the medium of infection. There was no suspicion attaching to shell-fish or other articles of food likely to cause infection. Sewers could hardly be implicated directly. Strood has no sewerage system in the ordinary sense of the word; most dwellings drain to cesspools, the contents of which soak away into the chalk or the superficial deposits overlying the chalk. As regards water, however, Strood has a different supply from Rochester, and all the invaded houses in Strood were supplied from the Strood waterworks. The water is distributed in a high- and a low-level supply, and the enteric fever incidence was practically the same over each area of service. On a theory of water causation the infective material must have been present at the source—i.e., in the water of the waterworks well.

The report deals in detail with the origin of the water supplied from the Strood waterworks and its liability to pollution. The water is obtained by pumping from a well 114 feet deep, which is supplied by an adit that has been formed by following up and enlarging a large fissure in the chalk. This has been opened up for a distance of 115 feet, and water enters it at its far end and from numerous subsidiary fissures which cross it more or less at right angles. By tracing the direction of these fissures it is possible to obtain an indication of the surface areas from which the water has been derived. On these areas, and in the neighbourhood of the well, are numerous soak-away cesspools connected with water-closets and drains known to be defective. The only cesspools which have been made watertight with the object of protecting the well are the four in, or close to, the waterworks site, while there are at least 50 soak-away cesspools within a radius of 300 yards from the waterworks. Other sources of possible pollution presented themselves, such as the manure on the adjoining allotment grounds, which may get into "swallow-holes" and so to fissures in the chalk. A case of enteric fever was ascertained to have been nursed in a house near the well between May 2nd and June 20th, 1912, and it was clear that enteric fever infection had passed into drains and cesspools in the neighbourhood. Unusually heavy rainfall occurred during June, 1912, and the water-level in the adit was high during the early part of July, so that it seemed probable that the outbreak had resulted from infected material washed down into the adit during the latter month. On August 12th Mr. S. I. Pritchett, the medical officer of health of Strood, and the borough surveyor decided that some chemical treatment of the water was necessary, and on August 17th the mains and reservoirs were disinfected by the addition of "chloros," to form a dilution of 1 in 20,000, and this was followed by the continued addition up to Oct. 22nd of 1 part of "chloros" to 100,000 of the water in the low-level reservoir through which the whole supply passes previous to its distribution. After Oct. 22nd the quantity of "chloros" was reduced by one-half. Within six days of the first addition of "chloros" the samples examined, which, however, were few in number, showed that the low-level reservoir water was practically sterile, and this was also the case with further samples examined in October. The treatment gave rise to complaints from the consumers on account of the taste of the water, and Dr. Wheaton points out the dangers of relying upon continuance of the treatment as a safeguard against a sudden and relatively heavy infection of the water, such as might occur in the circumstances to which the waterworks are exposed. Moreover, the possible action of chlorine compounds on pipes, valves, and taps, which is stated already to have given trouble in the case of taps at Strood, has to be borne in mind.

[1] London: Wyman and Sons, Fetter-lane; Edinburgh: H.M. Stationery Office; Dublin: E. Ponsonby. Price 4*d*.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 96 English and Welsh towns, with populations exceeding 50,000 persons at the last Census, and whose aggregate population at the middle of this year is estimated at 17,852,766 persons, 8864 births and 4623 deaths were registered during the week ended Saturday, May 31st. The annual rate of mortality in these towns, which had been 13·9, 12·8, and 13·4 per 1000 in the three preceding weeks, rose to 13·5 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these towns averaged 14·4 per 1000, against 14 3 in London during the same period. The annual death-rates in the several towns last week ranged from 5·7 in Eastbourne, 5·9 in East Ham, 6·0 in Ilford, 6·6 in Southend-on-Sea, and 6·7 in Walthamstow, to 20·9 in Stockton-on-Tees, 21·9 in Oldham, 22·2 in Stoke-on-Trent, 24·5 in Walsall, and 24·7 in Wigan.

The 4623 deaths from all causes were 50 in excess of the number in the previous week, and included 367 which were referred to the principal epidemic diseases, against 325 and 330 in the two preceding weeks. Of these 367 deaths, 117 resulted from measles, 91 from whooping-cough, 81 from infantile diarrhœal diseases, 41 from diphtheria, 23 from scarlet fever, and 14 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·1, against 0·9 and 1·0 per 1000 in the two preceding weeks. The deaths attributed to measles, which had been 151, 137, and 133 in the three preceding weeks, further fell to 117 last week, and caused the highest annual death-rates of 1·6 in Wolverhampton, 2·0 in Aberdeen, 2·3 in West Bromwich, 2·8 in Smethwick, and 3·0 in Edmonton. The deaths referred to whooping-cough, which had been 83, 65, and 67 in the three preceding weeks, rose to 91 last week, and included 30 in London, 6 in Leeds, 5 in Manchester, 4 in Liverpool, 4 in Newcastle-on-Tyne, and 3 each in Norwich, Stoke-on-Trent, Birmingham, and Sheffield. The fatal cases of diarrhœa and enteritis (among infants under 2 years of age), which had been 79, 71, and 70 in the three preceding weeks, rose to 81 last week; 20 deaths were registered in London, 6 in Liverpool, 4 in Birmingham, 4 in Preston, 4 in Acton, and 3 in Bristol. The deaths attributed to diphtheria, which had been 40, 26, and 28 in the three preceding weeks, rose to 41 last week, of which number 12 occurred in London, 3 in Walsall, and 2 each in Portsmouth, Stoke-on-Trent, Birmingham, Bradford, Sheffield, and Rhondda. The deaths referred to scarlet fever, which had been 16, 22, and 21 in the three preceding weeks, were 23 last week, and included 4 in London, 4 in Birmingham, 3 in Tynemouth, 2 in Smethwick, and 2 in Newport, Mon. The fatal cases of enteric fever, which had been 12, 4, and 11 in the three preceding weeks, rose to 14 last week; 3 deaths were recorded in Manchester, 2 in London, 2 in Liverpool, and 2 in Bradford.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had steadily increased from 1334 to 1441 in the

six preceding weeks, had slightly declined to 1430 on Saturday last; 177 new cases were admitted during the week, against 206, 171, and 193 in the three preceding weeks. These hospitals also contained on Saturday last 808 cases of diphtheria, 530 of measles, 299 of whooping-cough, and 41 of enteric fever, but not 1 of small-pox. The 1116 deaths from all causes in London were 40 fewer than the number in the previous week, and were equal to an annual death-rate of 12·9 per 1000. The deaths referred to diseases of the respiratory system, which had declined from 255 to 186 in the four preceding weeks, further fell to 162 last week, but were 19 in excess of the number recorded in the corresponding week of last year.

Of the 4623 deaths from all causes in the 96 towns, 172 resulted from various forms of violence and 350 were the subject of coroners' inquests. The causes of 24, or 0·5 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in 13 of its 14 suburban districts, in Sheffield, Leeds, Bristol, Bradford, Hull, Newcastle-on-Tyne, and in 60 other smaller towns. The 24 uncertified causes of death last week included 4 in Birmingham, 3 in Liverpool, 2 in Portsmouth, 2 in Stoke-on-Trent, and 2 in Sunderland.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns, with an aggregate population estimated at 2,259.600 persons at the middle of this year, 1223 births and 724 deaths were registered during the week ended Saturday, May 31st. The annual rate of mortality in these towns, which had steadily declined from 17·7 to 16·3 per 1000 in the six preceding weeks, rose to 16·7 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 17·0, against 14·4 per 1000 in the 96 large English towns. Among the several towns the annual death-rate last week ranged from 3·0 in Kilmarnock, 6·1 in Ayr, and 8·8 in Falkirk, to 18·9 in Paisley and in Hamilton, 20·1 in Greenock, and 24·7 in Aberdeen.

The 724 deaths from all causes were 19 in excess of the number in the previous week, and included 107 which were referred to the principal epidemic diseases, against 89 and 93 in the two preceding weeks. Of these 107 deaths, 40 resulted from whooping-cough, 33 from measles, 16 from infantile diarrhœal diseases, 7 from scarlet fever, 6 from diphtheria, and 5 from enteric fever, but not one from small-pox. These 107 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·5, against 1·1 per 1000 in the 96 large English towns. The deaths attributed to whooping-cough, which had been 45, 32, and 30 in the three preceding weeks, rose to 40 last week, and included 20 in Glasgow, 4 in Edinburgh, 3 in Aberdeen, 3 in Leith, and 2 each in Paisley, in Greenock, and in Motherwell. The deaths referred to measles, which had been 30, 33, and 40 in the three preceding weeks, declined to 33 last week; of this number 19 occurred in Glasgow, 12 in Aberdeen, and 2 in Dundee. The fatal cases of diarrhœa and enteritis (among infants under 2 years of age), which had been 18, 12, and 11 in the three preceding weeks, rose to 16 last week; 6 deaths were recorded in Glasgow, 3 in Dundee, and 2 in Aberdeen. The 7 deaths attributed to scarlet fever, of which 5 were registered in Glasgow, were slightly in excess of the average in the earlier weeks of the quarter. The deaths referred to diphtheria, which had been 9, 5, and 10 in the three preceding weeks, fell to 6 last week, of which number 2 were recorded in Dundee. Of the 5 fatal cases of enteric fever 3 occurred in Glasgow, 1 in Greenock, and 1 in Perth.

The deaths referred to diseases of the respiratory system, which had been 114, 117, and 81 in the three preceding weeks, rose to 118 in the week under notice; 22 deaths resulted from various forms of violence, against 31 and 36 in the two preceding weeks.

TWO CENTENARIANS.—Mrs. Charles Cooper, of 61, Upper Church-road, Weston-super-Mare, celebrated the 100th anniversary of her birthday last week.—Mrs. Skelton, of Stroud, attained her 101st birthday on May 29th.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned Staff-Surgeons have been advanced to the rank of Fleet-Surgeon in His Majesty's Fleet:—Hugh Prideaux Turnbull, Charles Railton Sheward, Sidney Roach, Eustace Arkwright, Edward Dominic Joseph O'Malley, Walter Kempson Hopkins, Walter Henry Ormonde Garde, Richard Foster Clark, Algernon Carter Bean, Samuel Conner, Robert Harry Mornement, Edwin Folliott, and Henry Hunt (dated May 25th, 1913).

The following appointments have been notified:—Staff-Surgeons: R. Thompson to the *Hussar*, additional, and to the *Hussar* on recommissioning; and R. Kennedy to the Royal Marine Artillery. Surgeon: F. St. B. Wickham to be lent to the *Blake*, temporarily.

ROYAL ARMY MEDICAL CORPS.

Major Oliver L. Robinson to be Lieutenant-Colonel, vice T. E. Noding, retired (dated May 25th, 1913).

Colonel T. J. R. Lucas, Assistant Director of Medical Services, has been granted three months' leave of absence home from India.

Lieutenant-Colonel E. Eckersley has taken over charge of the Military Hospital at Delhi Cantonment. Lieutenant-Colonel H. N. Thompson, D.S.O., has arrived home on leave from Lucknow Cantonment. Lieutenant-Colonel H. M. Adamson, at present senior medical officer at Strensall, has been selected for advancement to the higher rate of pay under Article 317 of the Royal Warrant for Promotion. Lieutenant-Colonel J. D. Ferguson, D.S.O., has been appointed Senior Medical Officer in the Straits Settlements, in succession to Lieutenant-Colonel J. J. C. Donnet.

Major T. F. Ritchie has been appointed to the London District on completion of service in West Africa. Major T. C. Mackenzie, D.S.O., has taken up duty at the Military Hospital, Dover. Major G. Dansey-Browning has been appointed to Gibraltar on transfer from the Military Hospital at Aldershot. Brevet-Major A. B. Smallman has been appointed Assistant Instructor at the School of Army Sanitation, Aldershot. Major W. J. Waters has joined at Tientsin. Major J. E. Brogden has taken up duty at Malta. Major W. L. Baker has returned home on leave of absence from Malta. Major G. J. Buchanan has been appointed for duty in the Eastern Command. Major A. Chopping has been transferred from Woolwich to the Southern Command. An exchange on the foreign roster has been approved between Major E. Brodribb and Major H. S. Thurston, the former officer proceeding to Malta. Major H. S. Anderson has taken up duty at Buttevant. Major A. F. Carlyon has joined at Port Louis, Mauritius. Major J. Tobin has arrived home on leave of absence from Gibraltar.

Captain C. A. T. Conyngham has been appointed Specialist in Dermatology and Venereal Diseases to the Burma Division. Captain J. B. Meldon has been transferred from the Military Hospital at Dover to Shorncliffe. Captain A. Hendry has been granted six months' leave of absence home from India. Captain N. E. Dunkerton has taken up duty in the London District. Captain A. E. G. Fraser has arrived home on leave of absence from Egypt. Captain C. Scaife has been appointed Specialist in the Prevention of Disease at Belgaum and placed in charge of the Bacteriological Laboratory at Brigade Headquarters. Captain J. H. Spencer has arrived home on leave of absence from Calcutta. Captain F. A. H. Clarke has been appointed Specialist in the Prevention of Disease and placed in charge of the Bacteriological Research Laboratory at Brigade Headquarters, Calcutta. Captain G. G. Collett has been granted six months' leave of absence home from India. Captain A. L. Otway has been transferred from Salisbury to the Military Hospital at Cosham. Captain G. E. Cathcart has joined the Station Hospital at Jubbulpore Cantonment on transfer from the Aldershot Command. Captain A. E. S. Irvine has returned home from the South African Command. Captain J. J. H. Beckton, at present serving on the Indian Establishment, has been granted six months' leave of absence on medical certificate. Captain H. Harding has been appointed to officiate in charge of the Military Hospital at Great Yarmouth during the absence of Major C. W. Allport. Captain J. A. Turnbull

has been transferred from the Military Hospital at Tidworth, Salisbury Plain, to Worcester. Captain A. Dawson has taken up duty in the Irish Command. Captain D. S. Skelton has taken up special duty at Zanzibar. Captain H. C. Winckworth has been appointed Specialist in Operative Surgery at the Royal Herbert Military Hospital at Woolwich. Captain W. J. Weston has been appointed in Medical Charge at Haulbowline, Queenstown Harbour. Captain J. R. Yourrell has joined at Rangoon. Captain E. M. Middleton has been granted two months' leave of absence in India. Captain A. S. Williams has been placed in Medical Charge at Kilbride Artillery Camp. Captain M. J. Williamson has taken up duty at the Military Hospital, Potchefstroom.

Lieutenant L. Buckley has been appointed in charge of the Reception Hospital at Longmore Camp, Bordon. Lieutenant J. D. Bowie has left Aldershot for Egypt. Lieutenant C. M. Finny has embarked for India. Lieutenant C. M. Ingoldsby has been transferred from the Military Hospital at Buttevant to Cork. Lieutenant J. L. Ritchie has taken up duty at Lichfield on transfer from the Military Hospital at York. Lieutenant D. Reynolds has left Limerick for service abroad. Lieutenant H. S. Blackmore has been appointed Medical Officer in Charge of St. John's Wood Barracks, London. Lieutenant J. T. Simson has been appointed to the Egyptian Army. Lieutenant E. A. Strachan has been transferred from the Military Hospital at Edinburgh to Fort George. Lieutenant W. Bisset has taken up duty at the Military Hospital at Ambala Cantonment. The following lieutenants have been placed under orders for service abroad during the coming trooping season: Lieutenants W. McNaughtan, D. T. M. Large, W. W. Pratt, W. F. Christie, M. Burnett, A. Hood, E. A. Strachan, and C. J. Blackie.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel E. Wilkinson has arrived home on leave of absence from India. Lieutenant-Colonel J. L. Macrae has been appointed Civil Surgeon at Coorg, in succession to Captain J. Scroggie, who has been reverted to Madras. Lieutenant-Colonel C. N. C. Wimberley has been granted eight months' furlough home from India. Lieutenant-Colonel W. B. Lane has taken up duty as Inspector-General of Prisons in the Central Provinces. Lieutenant-Colonel G. S. Thompson has been appointed to the advanced rate of pay under Article 317 of the Royal Warrant for Pay and Promotion. Lieutenant-Colonel C. Mactaggart has taken up duty as Inspector-General of Prisons in the United Provinces of Agra and Oudh. Lieutenant-Colonel R. Ronaldson Clarke has been appointed Civil Surgeon at Lahore.

Major J. C. Holdich Leicester has been appointed to officiate as Professor of Midwifery and Gynæcology to the Medical College, Calcutta, and Surgeon to the Eden Hospital for Women during the absence on leave of Lieutenant-Colonel C. R. M. Green. Major J. G. G. Swan has been transferred from Dalhousie to Jullunder and appointed Civil Surgeon. Major F. E. Baines has arrived home on leave of absence from India. Major W. T. McCowen has been appointed to hold substantive medical charge of the Second Battalion of the 39th Garhwal Rifles. Major D. McCay has been appointed to officiate as Professor of Materia Medica at Calcutta. Major J. Coppinger has been transferred from the Government Medical College at Calcutta to Delhi and appointed to officiate as Civil Surgeon and Medical Officer of Health during the absence of Lieutenant-Colonel H. Ogilvie. Major R. H. Price has been appointed a Specialist in Advanced Operative Surgery. Major F. N. Windsor has been granted combined leave for one year and eight months.

Captain J. MacWalters and Captain T. M. Reinhold have been appointed temporarily to the United Provinces of Agra and Oudh. Captain F. R. Coppinger has been appointed to hold substantive medical charge of the 109th Regiment of Infantry. Captain V. B. Nesfield has been transferred from Bijnor and appointed to officiate as Government Analyst and Bacteriologist to the United Provinces of Agra and Oudh. Captain H. Halliday has taken up duty at Lyallpur as Civil Surgeon. Captain G. F. Graham has taken up duty as Substantive Medical Officer to the 20th Regiment of Infantry. Captain H. P. Cook has been appointed to officiate as Civil Surgeon in the Wano District. Captain A. Cameron has been appointed Chief Plague Officer in the United Provinces of Agra and Oudh. Captain F. M. White has been appointed to officiate as Secretary to the Director-General in the Sanitary Department during the absence on leave of Major A. G. McKendrick. The services of Captain W. T. Finlayson have been placed at the disposal of the Government of the Punjab. Captain J. S. Shorten has been appointed Professor of Physiology at the Government Medical College, Calcutta, during the absence of Colonel G. F. A. Harris. Captain A. E. J. Lister has been appointed Professor of Physiology at the King George Medical College, Lucknow. Captain N. M. Wilson has been appointed Civil Surgeon at Mozuffergarh.

Lieutenant H. S. Cormack has been appointed a Specialist in Ophthalmology.

New Royal Warrant.

A Royal Warrant, dated June 3rd, has cancelled the Warrant of March, 1908, and August, 1911, with reference to promotion and precedence in the Service. The main provisions of the new Warrant are as follows:—

The substantive ranks of medical officers shall be surgeon-general (ranking as major-general), colonel, lieutenant-colonel, major, captain, and lieutenant.

The Director-General shall hold the substantive rank of surgeon-general but may rank as lieutenant-general on approval by the Secretary of State for India.

An officer will not be permitted to remain in the Service if at any time during the first three years from the date of his first commission his retention therein is, in the opinion of the Secretary of State for India in Council, undesirable.

A lieutenant shall be eligible for promotion to the rank of captain on completing three years' full-pay service, if he has previously passed the prescribed examinations, and is in all other respects qualified and recommended. An officer who has not had opportunities to pass the examinations may be provisionally promoted, but the promotion may be cancelled if he fails on getting such opportunity.

A captain shall be eligible, if in all respects qualified and recommended, for promotion to the rank of major on completing nine years' full pay service in the rank of captain. This period may be reduced by six months by the production of evidence of progress in any branch of knowledge likely to increase his efficiency. A captain who may be prevented by exigencies of the Service from obtaining an opportunity of qualifying for such accelerated promotion shall have the concession open to him for a period of four years after his promotion to the rank of major in ordinary course, but any ante-date of promotion which may be granted shall be without adjustment of pay.

A major shall be eligible, if in all respects qualified and recommended, for promotion to the rank of lieutenant-colonel on completing eight years' full pay service in the rank of major, including any period covered by ante-dated promotion without adjustment of pay.

Time on half-pay, not exceeding one year, shall be allowed to reckon as service for promotion, if removal to half-pay has been the consequence of medical unfitness caused by duty, military or civil.

A captain, after at least six years' service, a major or a lieutenant-colonel, may be promoted to the next higher rank by brevet for distinguished service in the field or for meritorious or distinguished service of an exceptional nature other than in the field.

A certain number of lieutenant-colonels may be specially selected for increased pay for ability and merit.

Promotion from the rank of lieutenant-colonel with increased pay to that of colonel, and from the rank of colonel to that of surgeon-general, shall be given by selection for ability and merit, and the grounds of such selection shall be stated to His Majesty in writing, and recorded in the office of the Secretary of State for India.

A lieutenant-colonel may also be promoted to the rank of colonel, and a colonel to the rank of surgeon-general, for distinguished service in the field. In any such case the officer shall remain supernumerary in the higher rank until the vacancy to which, in the ordinary course, he would have been promoted, or, in the case of an officer promoted to the rank of colonel, until selection for the rank of surgeon-general.

Exchanges between officers of the Service and officers of the Royal Army Medical Corps of the same rank and below the rank of major, and transfers of officers below the rank of major from either of the above-mentioned Services to the other shall be permitted with the approval of the Army Council and of the Secretary of State for India in Council, on condition that the officers have less than seven years' service and that the exchanges cause no hardship to brother officers.

Medical officers shall be placed on the retired list when they attain the following ages: Director-general, 62; surgeon-general and colonel, 60; lieutenant-colonel and major, 55. But a lieutenant-colonel who entered the Service before April 1st, 1911, and who has been specially selected for increased pay, may, if he attains the age of 55 years before he becomes entitled to the pension for 30 years' service, be retained until completion of such service, and in any special case where it would appear to be for the good of the Service that an officer should be continued in employment he may be so continued, subject in each case to the sanction of the Secretary of State for India in Council.

An officer appointed after Sept. 11th, 1890, who may retire on pension before completing 30 years' service, shall be liable, till he completes 55 years of age, to be recalled to duty in case of emergency.

Six of the most meritorious officers of the Indian Medical Service on the active list shall be named His Majesty's honorary physicians and six honorary surgeons, and they shall relinquish such appointment on retirement. On appointment as one of His Majesty's honorary physicians or honorary surgeons an officer under the rank of colonel in the Indian Medical Service may be promoted to the brevet rank of colonel.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Highland Mounted Brigade Field Ambulance, Royal Army Medical Corps: George Glendinning Middleton to be Lieutenant (dated April 1st, 1913).

South-Eastern Mounted Brigade Field Ambulance, Royal Army Medical Corps: Lieutenant Frederick B. Treves to be Captain (dated Dec. 8th, 1911).

1st East Anglian Field Ambulance, Royal Army Medical Corps: Captain Ernest V. Gostling to be Major (dated March 13th, 1913).

2nd East Anglian Field Ambulance, Royal Army Medical Corps: Thomas Aloysius Flynn to be Lieutenant (dated May 5th, 1913).

3rd Home Counties Field Ambulance, Royal Army Medical Corps: Alexander Hampton Brewer to be Lieutenant (dated May 2nd, 1913).

1st Wessex Field Ambulance, Royal Army Medical Corps: Frank Arthur Roper to be Lieutenant (dated April 22nd, 1913).

1st Southern General Hospital, Royal Army Medical Corps: Captain Walter J. Clarke resigns his commission (dated June 4th, 1913).

6th Battalion, The South Staffordshire Regiment: Surgeon-Captain Frederick Edge resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated June 4th, 1913).

Attached to Units other than Medical Units.—Lieutenant Cecil Johnson to be Captain (dated Dec. 4th, 1912).

For attachment to Units other than Medical Units.—James Henry Crane to be Lieutenant (dated Jan. 22nd, 1913). Ernest Stanley Stork to be Lieutenant (dated April 23rd, 1913). Major James Stratton Warrack, from the 1st Home Counties Field Ambulance, Royal Army Medical Corps, to be Major (dated June 4th, 1913).

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

The under-mentioned Lieutenants to be Captains: William H. L. McCarthy (dated May 17th, 1913) and John Inkster (dated May 24th, 1913).

THE JAPANESE NAVAL MEDICAL DEPARTMENT IN THE RUSSO-JAPANESE WAR.

In the *Archives de Médecine et Pharmacie Navales* for March Médecin de 1re classe (Staff-Surgeon) Dr. Chemin presents a seventh, and, it is said, a final, instalment of his interesting translation of the official medical history of the Japanese Navy in the Russo-Japanese war. The war lasted from Feb. 9th, 1904, to Oct. 16th, 1905, and the average daily strength of the navy was 42,500, of whom there were in all killed or wounded 3692.

	Total.	Per 1000.
Killed	1883	44·7
Died from wounds	127	2·8
Invalided	153	3·5
Recovered	1529	35·8
	3692	86·8

The table speaks volumes for the efficiency of the Japanese surgeons. Included in these totals are the 1080 men drowned and 143 injured in the sinking of their ships. Of those actually damaged in battle half were injured in one or other of the three great battles, and their disposal was as follows:—

Casualties in the Fleet Actions per 1000 Injured or Killed.

	Russo-Japanese war.	In our French wars about 1800.
Killed in the three great battles	165	250
Died from wounds...	55	75
Invalided...	75	95
Recovered and went to duty ...	705	580
	1000	1000

Killed means people who died without having their wounds dressed even once; they were more numerous formerly, the ligature being scarcely known. The ships that lost most heavily were the *Yoshino* class, who had 37 per cent. casualties; the marine artillery at the siege of Port Arthur lost 35 per cent.; and the battleships 27 per cent., as did the torpedo flotillas. Admiral Togo's proud flagship *Mikasa* lost in battle more heavily than any other ship, 28 per cent., but 86 per cent. of the *Hatsuse's* crew were drowned when she foundered. Officers lost 17 per 1000; the navigating staff, always on the bridge (perhaps that is why), lost far more than any other group. The engine-room staff had few wounds, but many deaths from drowning. The painstaking Japanese have divided the injuries into two groups, 2840 the direct result of the war (shells, fragments of ship, bullets and drowning) and 852 indirectly due to the war—rupture of membrana tympani or crush of hand by the mechanism of one's own gun. There are very neat and elaborate tables which will be useful to historians, and the medical profession should be grateful to the Japanese surgeons for so carefully putting so many interesting facts on record.

UNITED SERVICES MEDICAL SOCIETY.

The annual general meeting of this society will take place at the Royal Army Medical College, Grosvenor-road, S.W., at 5 P.M., on Wednesday next, June 11th.

Correspondence.

"Audi alteram partem."

THE OLIVER-SHARPEY LECTURES.

To the Editor of THE LANCET.

SIR,—In common, I feel sure, with all who are interested in cardio-vascular physiology and pathology, I have read with pleasure and instruction Dr. A. D. Waller's Oliver-Sharpey Lectures on the Electrical Action of the Human Heart, reported in your issues of May 24th and 31st.

I shall not presume to offer any remarks on the purely physical section of his lectures, in which he has almost succeeded in rendering mathematics tolerable to the uncalculating mind, which is relieved when it discovers that the learned lecturer appears to have borrowed his phonetic symbol for the cantering rhythm from the Bucolics of Virgil, for I venture to think that Dr. Waller could complete the melodious line in which "*tegmine*" is the ultimate dactyl.

It is, indeed, upon this canter that I chiefly desire to comment, only premising my remarks on this subject by stating that I have also read with much interest Dr. Waller's account of auriculo-ventricular dissociation on pp. 1515–16, and merely remark in this connexion that I do not think the anatomy of the auriculo-ventricular bundle is yet sufficiently determined to be assumed to be common knowledge, nor, such as it is, a final conception of that structure.

The cantering rhythm is, as we know, a very common phenomenon met with at all ages and in hearts both with and without organic valvular disease. Explanations of the canter—that is, of the so-called "third sound"—which have hitherto been given have not been generally accepted. A year ago I asked an expert electrocardiographer what Einthoven's instrument had to say to the matter, but he confessed he had not noted the sign specially. It was with much pleasure, therefore, that I observed that Dr. Waller had dealt so fully with this sign, so well known to clinicians. His term "hemitachycardia" is, I think, likely to become current, and it is certainly to be preferred to "cantering," "galloping," or any other sesquipedalian word. One occasionally has the good fortune to meet with cases which in themselves reveal the whole gamut of cardiac irregularity, and are in themselves an epitome of variations in cardiac motion.

THE LANCET of Oct. 8th, 1910, contains a minute study of such a case which was under my care at the Great Northern Central Hospital, under the title "The Meaning of the Audible Signs in Mitral Stenosis." This case exhibited tachycardia, bradycardia, cantering rhythm, complete ventricular irregularity (auricular fibrillation), and the normal rhythm with which it was discharged from hospital. The only part of this paper to which I shall refer is my explanation of the cantering, or, as I called it, the triple rhythm, for which *tegmine* with a long and soft final vowel is certainly a more euphonious symbol than the "lup-lup-dup" which I employed. Dr. Waller makes the final vowel short, which distinguishes a quick from a slow canter, although the canter cannot be quickened much without being abolished and giving place to the ordinary first and second sounds of the heart, a condition which is constantly induced by making a patient evincing the canter in the recumbent position sit up in bed, when, with the acceleration and augmentation dependent upon movement, the added sound frequently disappears. In the paper which you published, and which was originally

read at a meeting of the Association of Physicians of Great Britain and Ireland held at Liverpool, my view that the third sound "was due to an unregistered but regularly recurring ventricular extrasystole" was received with some scepticism, and while I do not think that my explanation accords altogether with Dr. Waller's, I am glad to note that he also attributes the added sound in the canter to a ventricular extrasystole of regular recurrence.

In my paper I also mentioned a case of quadruple rhythm or cor bigeminum, which one could at will convert into the triple or cantering rhythm, and again reproduce the bigeminal heart according as one directed the patient to stand or lie. The quickened rate of standing eliminated the first short diastolic pause and left systole, extrasystole, and long diastole to account for the three sounds, while the resumption of recumbency also reproduced the eliminated short diastole and gave systole, short diastole, extrasystole and long diastole to account for the quadruple sound or bigeminal heart. In the text case of the paper there was, however, no quadruplication of sounds, but the triple canter in which a ventricular extrasystole was considered to interpose between the normal first and second sound of the heart, and produce the unregistrable but audible third sound. This I still believe to be the explanation of the sign, and it only requires the elimination of the extrasystole to give the normal rhythm. With increased force and acceleration of the heart beat this occurred in the case in question. Dr. Waller[1] in his electrocardiogram of the canter shows *two* complete cycles followed by an extrasystole, and while remarking that it was "odd" only one sound should accompany these complete cardiac cycles, adds that it is by no means unusual. Personally, I venture to think that it is not only odd but also very unusual.

The heart of this case as shown[2] when "hemitachycardia" was fully established, was probably quicker than in Fig. 20, for the spacing between the apices of the extrasystoles is considerably less, and, admittedly, there is only *one* complete cycle in the interval. In this case, also, there are only two sounds registered which I take to be the first and second sounds of the heart, for the spacing of the sounds is the same as in Fig. 19. Here I would suggest that the third sound, which is essential to the canter, was certainly due to the extrasystole which is registered, but the sound itself has not been reproduced by the phonograph, although it was doubtless audible to the ear. So that since I read the paper to which I have referred we have advanced in the appreciation of the conditions underlying the cantering, triple, or hemitachycardial rhythm, in so far as we have now graphic evidence of the extrasystole causing the "third sound," but we have not yet succeeded in registering, except by the ear, the tone sound caused by the extrasystole.

Is it not possible that the "large electrical effect" of the extrasystole, which, as Dr. Waller remarks (p. 1517), "gives no pulse wave," may also fail to influence the phonograph, and probably for the same reason—namely, because it occurs while the ventricle is comparatively empty of blood? That the *audibility* of the heart sounds is largely dependent upon the presence of blood in the heart and large vessels was long ago demonstrated by Halford (1860), and this view is not invalidated by the fact that cardiac muscle is not without a share in producing the same phenomena. One word more.

Dr. Waller (p. 1519) dismisses as unimportant the question as to the initiative of nerve or muscle in the production of ventricular extrasystole. If "it matters little," and I would respectfully question this opinion, even when expressed by one who by inheritance and personal distinction is so closely associated with authority in physiology, it is certainly a point of very considerable interest, and may matter more when we know more of the conditions underlying cardiac sensibility and motion. The former of these is at present largely denied, and the latter, for reasons which do not appear to some sufficient, endowed with a degree and kind of automatism which, if true, would render the existence and influence of the nervous system rather superfluous. But the absolutely regular recurrence for a lengthened period of an independent ventricular extrasystole, together with the very power I have mentioned, posturally to convert a bigeminal heart into one with a cantering rhythm, and the latter into normal action, appears to me to indicate so intimate a control, reflex and direct, of all the phenomena usually described as "properties" of muscle, as to make the consideration of the neural factor in cardiac sensibility and motion a matter not only of scientific interest but of practical moment.

I am, Sir, yours faithfully,

ALEXANDER MORISON.

Upper Berkeley-street, W., June 2nd, 1913.

[1] THE LANCET, p. 1517, Fig. 20.
[2] Loc. cit., p. 1519, Fig. 22.

THE PHYSIOLOGY OF THE OPEN-AIR TREATMENT.

To the Editor of THE LANCET.

SIR,—My delay in answering Dr. Francis Hare's inquiry in THE LANCET of May 17th is due to the need I felt of investigating the original papers of Robin and Binet and finding out on what experimental facts they based the conclusions cited by Dr. Hare from "Progressive Medicine." Robin and Binet found an increased respiratory exchange and increased absorption of oxygen—which did not appear as CO_2 in the expired air—in tubercular patients with the exception of cases of meningitis and peritonitis. They also brought forward some evidence to show that the children of tubercular parents have a higher respiratory exchange, but their evidence on this point is very inconclusive. They conclude that the increased exchange and absorption of oxygen is part of the defensive mechanism, and that the more the disease is accentuated and the more the organism is overcome by the attack of the bacillus the less is the oxygen absorbed by the tissues. By the expression "oxygen absorbed by the tissues" they mean oxygen breathed in over and above that which appears as CO_2. It is to be expected that the febrile condition of consumptives would increase the respiratory exchange, the breaking down of tissue substance, and absorption of oxygen by the tissues.

I should not, however, be prepared to accept the figures arrived at by Robin and Binet without further investigation carried out by the exact methods recently introduced by Benedict, or by Douglas's excellent method of studying respiratory exchange. Whatever may be the results of such further inquiry, the fact remains that metabolism includes anabolism and katabolism, and that I had both in view when I discussed the influence of open air and exercise on metabolism. Anabolism and growth take place as the result of katabolism. We cannot feed a muscle strong, but we can develop it by exercise. The katabolic products excite the vigorous circulation and respiration, and the excretion of these products renews the appetite. The katabolism produced by the invasion of the bacillus differs from the normal katabolism; the latter, provoked by cool moving air and exercise, builds up and strengthens the defensive mechanisms. It goes without saying that the exercise must not be carried to the point of exhaustion.

I am, Sir, yours faithfully,

LEONARD HILL.

London Hospital Medical College, June 3rd, 1913.

THE LATE DUKE OF ABERCORN AND THE WEST LONDON HOSPITAL.

To the Editor of THE LANCET.

SIR,—With the concurrence of His Royal Highness Prince Arthur of Connaught, President of the Hospital, we ask you to be good enough to allow space in your influential paper to bring under the notice of your readers the following particulars concerning an effort which is now being made in memory of the late Duke of Abercorn, who as the former president and chairman of the hospital was throughout a lengthened period closely associated with its daily life and work.

It is generally felt that no more fitting tribute can be paid to his memory than by erecting new accommodation for the nursing staff and to name it the "Abercorn Home for Nurses." The matter was submitted to His Royal Highness Prince Arthur of Connaught on the occasion of his visit on May 21st, and he then authorised us to state that it met with his entire approval. At present the nurses are crowded into seven private houses in various parts of the hospital premises.

Owing to want of space it is impossible to make adequate provision for our nurses, and most of the bedrooms are shared by two or three. The question of the proper housing of the nursing staff was one in which the late Duke took the greatest personal interest, and in the hope of improving matters an appeal was made under his direction which resulted in some £2000 being subscribed towards a new "Home."

A further £10,000 is required to carry out the work, and it is earnestly hoped that sufficient help will be forthcoming to enable the late President's wish to be realised, and at the same time afford an opportunity for the board to associate his name for ever with a work which he had so much at heart.

Contributions, however small, will be very gratefully received and may be addressed to us at the hospital.

We are, Sir, yours faithfully,

ARTHUR HILL,
Chairman, "Abercorn Memorial" Executive Committee.

GEO. F. MARSHALL,
Chairman, West London Hospital.

June 3rd, 1913.

PS.—Up to the present a total sum of £3200 has been received.

THE LATE MR. JORDAN LLOYD.

To the Editor of THE LANCET.

SIR,—It has been decided to commemorate the work of the late Mr. Jordan Lloyd by naming one of the surgical wards at Queen's Hospital after him.

The medical staff are anxious to appeal, through your courtesy, to members of the profession in Birmingham and the Midlands to aid in the endowment of this ward. They feel that those with whom Mr. Jordan Lloyd worked for so many years, and many of whom owe so much to him as a teacher, would wish to be associated in contributing to the Memorial Fund.

Cheques should be made payable to the Queen's Hospital (Jordan Lloyd Memorial Fund), and forwarded to Mr. H. F. Keep, Queen's Hospital, Birmingham.

I am, Sir, yours faithfully,

DOUGLAS STANLEY,
Chairman of the Medical Committee.

Queen's Hospital, Birmingham, June 3rd, 1913.

PROGERIA AND ATELEIOSIS.

To the Editor of THE LANCET.

SIR,—I should be obliged if you could afford space in THE LANCET for the following communication, although it arrives so late upon the scene. (Reasons for this will, I think, be obvious.)

In THE LANCET of Feb. 1st of this year was a paper by Professor A. Keith upon the subject of progeria and ateleiosis. It is obvious, in the case of ateleiosis, that there is urgent need of post-mortem examinations. Such cases as that described by Rennie,[1] the condition of the sella turcica in Paltauf's case,[2] and the recent experimental work of the Italian school upon dogs (removal of the pituitary gland in young puppies), indicate that it is to the pituitary body that attention should be directed in the main. But all recorded post-mortem accounts are silent as to the condition of this structure in the cases examined.

I wish to indicate (in case the fact should not be known already) to Mr. Hastings Gilford, Professor Keith, and other readers of THE LANCET who are interested in this subject that there are the following cases of this condition (amongst many others) touring about Europe or America in "shows," and to submit that it would be deplorable if any of them were permitted to die without necropsy, for it would be a great waste of opportunity. I may say that I have myself endeavoured to make arrangements for this to be done, but without any success, and I have come to realise that only the great can bring this to pass, and that the efforts in this direction of such as myself will be, as they have been, unavailing.

There are the following cases of Mr. Hastings Gilford's second group. 1. The two brothers Magri (Primo and Ernesto—known as "Baron" Magri) from Tuscany. These have been described by Veratti. Aged about 60 to 65 years. It may be presumed that one or other may die before very long. 2. The two brothers Heinrich and Bruno Glauer, from Innsbruck, Tyrol. Aged about 26 and 22 years. 3. Smaun Sing H'Poo, from Burma, aged about 26 years. He has been described by Virchow. (There was another case in this family which died very young.) This case is at present in Australia touring in a "freak" show. 4. Ludwig Alpts, aged about 20 years, smaller than any of the others. His mother, an aunt, and a female cousin are achondroplasic, while his reputed father was ateleiotic. 5. A Turkish case of between 50 and 60 years of age, the name of which I forget.

I hope, Sir, I shall be pardoned for writing as above. It appears to be very important that as many of these cases as possible should be examined post mortem by one or other of the readers of THE LANCET. I wish to call attention to their existence in case this is not generally known, in the hope that adequate examination may be made, for one or more may die before very long in any part of the world.

I am, Sir, yours faithfully,

Adelaide, South Australia, April 29th, 1913. H. RISCHBIETH.

[1] Brit. Med. Jour., June 29th, 1912.
[2] Mikolajek: Ueber den Zwergwachs.

ROBERT LISTON'S ANEURYSM.

To the Editor of THE LANCET.

SIR,—Can any of your readers tell me where is the preparation of the aortic aneurysm taken from Robert Liston in 1847? It is not at University College, the Royal College of Surgeons, London, or Edinburgh, Cambridge, or Norwich. There is a persistent tradition that it is still in existence, but I have not been able to locate it. In all probability the preparation was put up by the late William Cadge, who made the post-mortem examination.

I am, Sir, yours faithfully,

F. WILLIAM COCK, M.D. Durh., F.S.A.

1, Porchester Houses, Porchester-square, W., May 29th, 1913.

SCARLET FEVER AND ITS CONGENERS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 13th, 1894, there is an annotation on "some cases which recently happened in that parish (Fulham) and which simulated scarlet fever." It seems as if the outbreak in Cheltenham and some other places of the malady described in the lay press is the same as that referred to in THE LANCET nearly 20 years ago. A letter of the late Sir Samuel Wilks which was published in the *British Medical Journal* was certainly of interest, for, in his opinion, "If all these infectious diseases are due to morbific germs, I suppose fresh ones might appear, and others depart, just as the different blights affecting the vegetable world." I am, Sir, yours faithfully,

West Drayton, June 3rd, 1913. ROBERT LEE.

RETRACTION RING AND OBSTRUCTION IN LABOUR.

To the Editor of THE LANCET.

SIR,—In the report of my remarks in replying to the criticisms on my paper on the Retraction Ring which appears on p. 1532 of THE LANCET of this date, it is stated: "He would *not* do Cæsarean section." The *not* should be left out. I am, Sir, yours faithfully,

Glasgow, May 31st, 1913. ROBERT JARDINE.

THE CHADWICK PUBLIC LECTURES.—These lectures (illustrated by lantern slides) are being given by Dr. F. W. Mott in the lecture-room of the Royal Society of Arts, John-street, Adelphi, W.C. The first lecture is delivered to-day, Friday, June 6th. The second and third will be given on June 13th and 20th respectively. The subject is—Nature and Nurture in Mental Development, thus subdivided: (*a*) Structure and Development of the Brain; (*b*) Inborn Potentialities of the Brain of the Child; (*c*) Influence of Education and Nutrition. Admission is free, and information may be obtained of the secretary, Mrs. Aubrey Richardson, at the offices of the Trust, 8, Dartmouth-street, Westminster.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

(FROM OUR BERLIN CORRESPONDENT.)

(*Concluded from page 1561.*)

The Clinical Value of the Lymphocytes.

Dr. BERGEL (Hohensalza) said that the lymphocytes which contained a ferment capable of breaking up fat destroyed pathogenic microbes having a fatty component, and for this reason these lymphocytes had a powerful prophylactic action against diseases caused by microbes having a fatty superficies, such as those of tuberculosis, lepra, and syphilis. Their ferments when discharged into the circulation had a specific power of resisting the various toxins above mentioned and made them inert. The success of the Wassermann reaction depended on the specific action of the ferment of the leucocytes against the toxin of the fatty microbe of syphilis. On the other hand, leucocytes which digested albuminous substances destroyed pathogenic microbes having an albuminous component.

Dr. TURBAN (Davos) said that the lymphocytosis found in healthy persons in high altitudes was a specific feature of the curative action of Alpine climates.

Dr. ROTHSCHILD (Soden) maintained that sputa containing lymphocytes were a specific symptom of incipient tuberculosis of the lungs.

"Juvenile Asthenia."

Dr. JAMIN (Heidelberg) said that in young persons the clinical symptoms of chlorosis were sometimes present without the characteristic alterations of the morphology and colour of the blood. Some of these cases, which showed only slight alterations of the form and the colour of the erythrocytes, approached nearly to real chlorosis and might be successfully treated by preparations of iron. In another group the chlorotic symptoms were the results of other internal diseases; a third group of exceptionally severe cases showed an alteration of the leucocytes—namely, a decrease of their number and a preponderance of uninuclear forms, whilst the erythrocytes were normal in number and quantity. It was probable that this disease, to which the name of "juvenile asthenia" had been given, was caused by disorders of the internal secretion, and was, in fact, an arrest of development.

The Diagnosis of Tuberculosis of the Lungs.

Dr. HAMMER (Heidelberg) said that the diagnosis of tuberculosis of the lungs might be made by examining the blood according to the "complement binding" process in which an extract from tuberculous tissue combined with tuberculin as antigen was employed. The reaction was positive in about 100 per cent. of the cases; it, however, was difficult to distinguish the patients who had formerly contracted tuberculous infection from those in whom the infection was still active.

Dr. SCHRUMPF (St. Moritz) reported that Professor Maragliano, of Genoa, had given inoculations of killed tubercle bacilli to numerous patients liable to become tuberculous, the majority being children of tuberculous parents. Pustules developed at the site of the inoculation without rise of temperature, provided that the organism did not contain a tuberculous focus, but when a tuberculous focus existed there was a rise of temperature up to 38° C. The serological examination showed after a fortnight a considerable increase of the opsonic index and of the capability of agglutination, as well as the presence of specific precipitins and antitoxins. Of these inoculated children 465 were afterwards examined, but in none of them had tuberculosis developed. A similar success was obtained by inoculation for enteric fever. The antitoxins were found in the milk of suckling women, so that it was possible to administer immunising milk to an infant by previously inoculating a wet nurse.

Insertion of Tubes into the Duodenum.

Professor ROSENBERGER (Munich) recommended thin tubes of caoutchouc, which after being swallowed were directed into the duodenum by the stomach. The value of this method of treating the duodenum was that the stomach was allowed to remain inactive without the patients suffering from hunger. The caoutchouc tube was left in the duodenum for several days, and fluid food might be administered; the method was especially valuable for the treatment of ulcers.

Dr. FUNK (Cologne) read a paper on the remedial introduction into the stomach of warm air saturated with moisture, conveyed through a thin, soft tube. Remarkable success was obtained in certain diseases of the stomach, the pancreas, and the liver, as well as in effusions into the left pleura.

Mechanical Treatment of Disorders of the Cardiac Compensation.

Dr. TORNAI (Budapest) described a method of treating certain forms of heart disease by constriction of the thorax by a very strong corset. The diaphragm was in this way compelled to do the entire work of inspiration unassisted, and, in fact, the movements of the diaphragm were doubled during constriction. At the same time a constriction of the abdomen was produced by a bandage, so that the abdominal organs were compressed from two sides and the venous blood was forced out with increased power. The corset was well supported by the patients. Dr. Tornai has had several good results in cardiac diseases.

Physiological Effects of Radium Emanation.

Dr. ENGELMANN (Kreuznach) stated that injections of solutions containing radium emanation produced marked leucocytosis in animals during 14 days. Intra-arterial injections led to a retention of the radioactive substances within the tissue nourished by the artery in question. Intravenous injections produced a slowing of the pulse and an increase of its amplitude.

Immunisation against Diphtheria.

Professor BEHRING (Marburg) made a preliminary statement on the subject of a new prophylactic compound against diphtheria, a mixture of diphtheria toxin with antitoxin. He said that Professor Hahn, of Magdeburg, had administered this preparation to persons liable to contract diphtheria. It proved to be quite harmless and caused the formation of a great quantity of antitoxic substances in the blood of the persons who had received injections, so that they became immune against diphtheria. The same result was obtained by Professor Matthes, of Marburg, who had once obtained 600,000 antitoxin units after a somewhat strong reaction, whilst about 250 units give a sufficient protection. In a report of the Marburg Children's Hospital it was stated that none of the children to whom the preparation had been administered had contracted diphtheria, although an epidemic of that disease had broken out in the hospital, and although persons known to be carriers of diphtheria bacilli were continuously in the ward. It was Dr. Behring's conviction that the preparation would, like Jenner's vaccination against small-pox, produce an immunisation of long duration after one or two injections without injuring the health.

Professor Behring is prepared to give a quantity of the preparation to hospital physicians under certain conditions. It must be tested as to its sterility and as to its non-toxicity by experiments on guinea-pigs. In stating the result a distinction must be made between newly-born infants and children of the age periods from 1 to 4 years, 5 to 10 years, and 11 to 16 years respectively. Previously to an injection the following examinations are to be made: The quantity of antitoxin in the blood must be stated; the tonsils must be examined, microscopically and by culture, as to the presence of diphtheria bacilli, and if required a subcutaneous injection of diphtheria toxin must be made by a test toxin delivered by Professor Behring himself. Professor Behring will in every case have the right of being consulted as to whether the injection is to be made once or twice, whether a smaller or greater dose is to be administered, and at what interval a second injection, if any, is to be made. Three weeks after the last injection the blood is to be examined as to its antitoxin content. When a danger of catching diphtheria exists the preventive treatment is advisable in hospitals for patients and for the nursing staff, in schools, and in families. Contra-indications are the incubation period of diphtheria and cardiac weakness. Without an immediate danger of catching diphtheria the preventive treatment is indicated generally in jails, lying-in hospitals, and orphan asylums. Finally, carriers of bacilli must undergo the treatment, and the influence of the injection on the bacilli must be ascertained. It is the purpose of the treatment to produce an immunity

of long duration and to obtain anthropogenous antitoxin of high value. The preparation is given only under the above conditions and to hospitals where the examinations required can be performed.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The University of Manchester.

FROM the annual statement of the Vice-Chancellor we find that altogether there were 1663 students attending the University during 1912–13, and of these 372 are medical students, including 32 women students. Of these, 134 are preparing for degrees of the University, 7 for the University of London, 10 for other universities, 2 for F.R.C.S., 29 for Conjoint Board, 3 for the Triple qualification, 3 for the Diploma in Psychological Medicine, 3 for B.D.S., 48 for L.D.S. Manch., 15 for L.D.S. Eng., and 41 are working in special departments—viz., medical, 5; pharmaceutical, 5; and public health, 31.—In the dental department an arrangement, which has been approved by the Board of Education, has been made with the Manchester Dental Hospital. In view of this arrangement the Board now makes a substantial grant in respect of the clinical instruction given in the Dental Hospital to students reading for the degree or diploma in dentistry. A substantial sum will thus become available annually for the maintenance and improvement of clinical instruction, and for providing facilities for students in the dental department.—Some time ago the University formulated a scheme for a Diploma in Ophthalmology somewhat on the lines of the diplomas in this subject in other universities. This scheme received the approval of Senate and Council. At a meeting of Convocation held on May 23rd this body, by a majority, passed a resolution that "in the opinion of Convocation the institution of a Diploma in Ophthalmology is not to be desired." This resolution was forwarded to the Court which met on May 28th, when the question was referred back for further consideration. At the same meeting of the Court, Lord Morley presiding, a letter was read from the Vice-Chancellor, Sir Alfred Hopkinson, tendering his resignation of the office of Vice-Chancellor. A unanimous resolution was passed asking the Vice-Chancellor to reconsider his decision "in the interests of the University."

Virtues of Gas and Gas Fires: Manchester's Smoky Atmosphere.

The Manchester and Salford Sanitary Association held its annual meeting last week, when it was reported that a committee had undertaken an inquiry into the question of gas fires and their wholesomeness. The results of the inquiry will, it is hoped, lead to the improvement of gas fires, and probably help to promote their extended usefulness. An address was given by Mr. William Thomson on Gas Fires, their Proper Construction, Economic Use, and Hygienic Advantages. The subject was treated rather from the point of view of the chemist than from that of the engineer. Mr. Thomson ridiculed the notion that a basin of water placed near a gas fire tended to moisten the atmosphere. A strong appeal was made for cheapening the charge for gas, so as to encourage the general use of gas fires. A great advantage through the burning of gas in houses and offices would be the keeping of the air of the town purer, thereby obviating the enormous injury caused to decorations and the great cost of washing and cleaning entailed by "the present barbarous method of burning raw coal." The speaker mentioned a weaving shed with an area of 11,000 square yards from which was taken 40 tons of sludge, this having accumulated in three years, and this amount, he contended, was due entirely to the dirty atmosphere of the city. Another speaker went further, and stated that every foreigner who came to Manchester spoke of the filthiness of the working-class house. It is claimed that the gas fires recently placed on the market show a great improvement over the gas fires previously available even four or five years ago, and that they give about 50 per cent. of their heat by means of radiation and only about 25 per cent. by means of convection, the remaining 25 per cent. being utilised to ventilate the room and carry off the products of combustion. The most hygienic source of heat is the sun. The heat rays from such a radiant body do not heat the air through which they pass. In this connexion reference may be made to the paper contributed by Professor Leonard Hill and Mr. F. F. Muecke to THE LANCET of May 10th on "Colds in the Head." The heat given out by a modern gas fire causes the nose to be less susceptible to infection than convection heat. An all essential point regarding the modern gas fire is that it should be most carefully fixed, so that none of the products of combustion reach the atmosphere of the living room.

Lancashire Education Committee's Report on Defects in School Children.

Last year, out of 51,356 school children examined by the Lancashire education committee's medical inspectors, no fewer than 24,901 were found to have physical defects. The number of children on the roll was 153,711, and the average attendance was 131,584, 5188 being half-timers. The most common ailments were: skin diseases, 7369; enlarged tonsils, 3787; adenoids, 1570; while 5339 had very bad teeth. The total number of actual eye diseases was 2221, and there were 1121 cases of squint. Heart disease was found in 278, diseases of the lungs in 499, rickets in 942, and 418 were under-nourished.

A Unique Case: Double Maternity Benefit under the National Insurance Act.

Some weeks ago at Barrow, near Clitheroe, the mother gave birth to a second child five weeks after the first child was born. The father made application for maternity benefit in respect of the second child. The Commissioners have decided that it was a separate birth, thus entitling the parents to the double benefit.

Ptomaine Outbreak at Northwich.

Between May 30th and June 1st no fewer than 14 persons at Northwich were medically certified to be suffering from ptomaine poisoning, several of the cases being acute and dangerous. The outbreak is attributed to pressed beef. Samples have been sent to the Public Health Laboratory, Manchester, for analysis.

June 3rd.

NEWCASTLE-ON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

Royal Victoria Infirmary: Presentations to Dr. David Drummond and Sir Thomas Oliver.

A quarterly court of governors of this charity was held on May 29th in the infirmary, Sir Riley Lord presiding over a large attendance. Apart from pure business the main feature of the meeting was the presentation of illuminated addresses to Dr. David Drummond and Sir Thomas Oliver, M.D., on the occasion of their retirement from the active staff of the institution, the statutory age limit being attained. In presenting the address to Dr. Drummond Sir Riley Lord expressed the great regret of the governors that the time had arrived for his retirement. Dr. Drummond had been an honorary physician for 34 years, a period which had only been exceeded on one previous occasion, by the late Dr. Thomas Emerson Headlam, who was physician for 38 years. Dr. Drummond's association with the infirmary had been a notable one, distinguished by faithful attention to duty and careful observance of official responsibility. By his distinctive ability and diagnostic acumen he had attained to a position of eminence and fame in his profession, and as a professor of clinical medicine he had maintained the traditions of the infirmary. The address, which Sir Riley Lord then presented to Sir Thomas Oliver, pointed out that the recipient had been a physician on the staff for 33 years, and paid a tribute to his high, even international, reputation as a scientific physician and a practical physiologist. It commented on the effects of his investigations on trade conditions and their relation to the public health, and pointed out the resulting benefactions to the industrial community.

Voluntary Hospitals and Workmen's Contributions.

At the same quarterly court the following motion in the name of the Chopwell Miners' Lodge was considered:—

That employers of labour, limited liability companies, industrial concerns, and business men be asked to contribute to the funds of the

Royal Victoria Infirmary in the same proportionate rate as their employees, according to their respective income and profits.

Before this motion was proposed the chairman recalled that the institution was founded on a voluntary basis, and if the motion were carried it would alter that basis. Such a resolution could do no good, and it might do a great deal of harm. He hoped the Chopwell miners would not insist upon it. The delegate in charge of the motion then moved it, and protested against the chairman's procedure of speaking against it before it had been proposed. The motion was seconded, and on being put to the meeting was declared lost by 64 votes to 93.

School Medical Officers: A Coördination Plan at South Shields.

The appointment of a new schools medical officer was the subject which occupied most attention at the monthly meeting of the South Shields Education Committee on May 26th. The late occupant of the position of school medical officer, Dr. A. B. Raffle, having secured another appointment, the education subcommittee recommended that when his successor was appointed the post should be coördinated with the medical work carried out by the town council, and that the new official should be an assistant medical officer of health to carry out the medical inspection of school children under the supervision of the borough medical officer, who would be the principal school medical officer. The proposal was opposed on the ground that the work had been done quite efficiently under the existing system and that a good system should not be changed. Eventually it was decided to advertise for candidates for the post under the proposed new system. It was stated that the new officer would be subordinate to the education committee, to whom he would have to make his reports. The salary decided upon was £250 per annum.

June 3rd.

BRISTOL AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

The University of Bristol.

Dr. Gerothwohl has issued a statement in reply to the letter of the Vice-Chancellor to the Court of the University, which was noticed in these columns a fortnight ago, and has collected a hundred signatures from professors and lecturers in other universities to a memorial to Lord Haldane, Chancellor of the University of Bristol, praying for an inquiry into the "dismissal" of Professor Cowl from the chair of English Literature which he held in University College, Bristol. To the outside observer the whole matter must be growing wearisome; to those concerned with the administration of the University it is irritating in so far as the critic may do injury to a new University which, whatever its mistakes, is trying to serve its own and future generations. If an inquiry will bring the squabble to an end it will be welcomed by all who have the welfare of the University at heart, and nowhere is this feeling more keen than in the medical faculty.

The Treatment of Tuberculosis in Bristol.

The campaign against tuberculosis is gradually emerging from its initial stages into a condition in which it is possible to see how it is shaping, in some respects at all events. First of all, there is the work of the dispensary and sanatoriums. At the former, in the week ending May 10th, 63 insured persons, 73 dependents, and 10 non-insured were seen; the medical officer paid 15 domiciliary visits, and the nurse 20. In the week following, 98 persons were seen at the dispensary, while the medical officer visited 6 houses and the nurse 10. It appears from this that the dispensary is developing into a special out-patient department. Another matter of importance, to which attention has been drawn by the remarkable outcry against the establishment of an open-air school, is the lack of provision for the treatment of children excluded from school on account of tuberculosis. Nothing has so far been established for this class of patient, though the number of children so excluded (120) includes sufferers from glandular and osseous tuberculosis, conditions whose need of treatment is so obvious that a lay committee might be expected to discern it. The annual report of the Winsley Sanatorium shows that out of a total of 273 patients treated there in 1912 108 came from Bristol. During the same year 268 patients left the sanatorium; of these, 133 were regarded as fit for some work, 82 as improved, 51 as not improved, while 2 died. It is to be hoped that under the National Insurance Act it will be possible to secure a more complete follow-up of patients leaving the institution than has been feasible hitherto. The number of beds at Bristol's disposal is shortly to be increased; at present there are 27 patients from Bristol at Winsley, and 22 at the other sanatorium at Ham Green.

Research Defence Society.

At the annual meeting of the Bristol branch of this society it was stated that there were 88 members and associates. Dr. W. Alexander Smith was re-elected chairman.

The Remuneration of District Medical Officers.

The medical officer for the Ilfracombe district having resigned the appointment a few months ago, owing, it is generally believed, to the inadequacy of the remuneration, the Barnstaple board of guardians is experiencing trouble in obtaining a successor. The appointment was recently advertised, and an applicant was duly appointed. Subsequently the guardians were unable to get this gentleman to give a definite date on which he could commence duty, and eventually the post was again advertised. At the meeting of the board held on May 30th it was reported that no applications had been received, and after some discussion one guardian suggested that the clerk should write to various hospitals and see if there were any qualified "students" who would take the appointment, and apparently this course of action was determined upon. If the Barnstaple board of guardians offers an adequate salary it will experience no difficulty in obtaining the services of a fully qualified and experienced district medical officer.

The Milk and Dairies Bill.

The annual meeting of the Devon Rural District Councils and Poor-law Association was held at the Exeter Guildhall on May 29th. An interesting discussion took place over the Milk and Dairies Bill, and Mr. S. Kidner, speaking on the inspection of cattle, said that it was proposed that the medical officer of health should be the inspector of the animals, accompanied by a veterinary surgeon. Mr. Kidner thought that farmers objected to medical men examining their cattle, and eventually a resolution was passed stating that, in the opinion of the conference, the decision as to whether any animal was affected with tuberculosis should rest with the veterinary inspector and not with the medical officer of health.

Bridgwater Hospital.

At a recent meeting of the subscribers to the Bridgwater Hospital it was decided to carry out a scheme for the enlargement and alteration of the institution at an estimated expenditure of £5010. The sum is to be raised by selling some of the invested funds of the hospital, and as this will reduce the income of the charity by about £200 per annum, an urgent appeal will be made for increased subscriptions.

The late Dr. E. A. Wilson.

The sledging flag taken by the late Dr. E. A. Wilson to the South Pole has been presented by his widow to Gloucester Cathedral, and the Dean (Dr. H. D. M. Spence-Jones) has had it hung among the war-worn flags of the Gloucestershire Regiment in the beautiful lady chapel of the minster.

Death of Mr. Alfred Henry Haines, M.R.C.S. Eng., L.S.A.

Mr. Alfred Henry Haines died suddenly on May 26th from syncope at his residence, Rhayader, Radnorshire, in his sixty-fourth year. The deceased was the second son of the late Mr. William Haines, M.R.C.S. Eng., of Avon Dassett, Warwickshire. He received his medical education at Guy's Hospital, taking his double qualification in 1871. He shortly afterwards started practice in Wisbech, Cambridgeshire, and was at one time medical officer of health for Long Sutton, Sutton Bridge urban district council, and Wisbech Port. He came later to Bristol, and practised for many years at Cotham, where he had an extensive connexion and was highly esteemed. A few years ago he retired from active work and took up his residence at Rhayader.

June 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Scottish Medical Insurance Council.

THE Scottish Committee of the British Medical Association has withdrawn from the Medical Insurance Council, a step which appears to lead to the dissolution of that Council.

Causes of Abnormally Defective Eyesight at Kilsyth.

Dr. J. B. Stewart, at the request of the Kilsyth burgh school board, has prepared a report on the causes of the abnormal extent of defective eyesight which he found when examining the Kilsyth school children compared with others. He points out that heredity plays an important part in the cause of defective vision. Kilsyth is a mining area, and coal-mining has a very trying effect on the miners' eyes. If there was any defect present when a young man began his career in the mines it was certainly not improved by his subsequent work there. This going on for several generations accounted in a large measure for the present condition of the eyes of Kilsyth children.

Infant Mortality in Paisley.

The work being done in Paisley by the burgh local authority and private agencies with the view of minimising the mortality of infants under one year of age has been summarised by the medical officer of health for the burgh. Last year the number of infants under one year who died was 209, which gave an infantile mortality rate of 92·15 per 1000 births, being 33 deaths less than the previous year, when the rate was 111·72 per 1000 births. It is only right to point out, however, that there were during the past year exceptional circumstances which conduced to this result. Work was more plentiful, and the conditions which affect very young children in times of unemployment were absent. The medical officer of health in his report drew attention to the question of hospital accommodation for children. In this respect Paisley compares badly with other towns. The Royal Alexandra Infirmary admits young children, but these are accommodated along with the adults, and the number of admissions is, in the circumstances, limited. Although for a general hospital the percentage of children is high, in other towns the children's hospital does away with the necessity for many admissions to the general hospital. The local authority during the past year has been in communication with the infirmary directors regarding this matter, but it is understood that the directors for financial reasons are meanwhile unable to do anything further.

Insurance Medical Benefit for Temporary Residents.

At a special meeting of the Aberdeen Borough Health Insurance Committee held on May 30th the clerk read a letter from the Commissioners regarding the provision of medical benefit to temporary residents, with a view to eliciting the views of the committee on the two alternative schemes. The chairman explained these alternatives and the unsatisfactory nature of the present arrangement whereby a person going out of his own insurance district had to give notice to the committee in whose district he was to be temporarily resident. The difficulty of getting insured persons to do so was, he said, very great. A separate memorandum had been issued with regard to fish workers, requesting employers to give notice to all the workers who were removing from one district to another in order that special provision might be made for them in regard to medical benefit. The method suggested by the Commissioners was that the doctor should be paid for those workers on a basis of attendance. With regard to the two methods suggested by the Commissioners for the provision of medical benefit to temporary residents, the first—namely, that a central fund be formed on the basis of a case value contribution, which meant that if in Aberdeen each case cost 10*s.*, and in Aberdeenshire 6*s.*, if any person from Aberdeen went into the county and required medical attendance the city committee would be charged 10*s.*, and if someone from the county came into the town of Aberdeen and required medical attendance the county committee would be charged 6*s.*—was the one generally preferred by the Medical Committee. Generally speaking, however, the Medical Committee were of opinion that a much better system would have been to have had the central fund contributed by Parliament. There did not seem to be any likelihood of either alternative being generally accepted by the profession; in fact, the medical men in the county had refused to do so. Eventually it was agreed that the scheme could not be brought into operation for the present year, but cognisance was taken of the fact that the local committee had unanimously preferred the case value system.

Insurance Act Grievances in Dundee.

Owing to the fact that there are 95 deposit contributors resident in Dundee who had not a sufficient sum at the credit of their accounts, as at Jan. 13th last, to permit of their continuing to receive medical benefit after April 30th, a special committee has been appointed to give consideration to the matter and bring forward recommendations. The clerk to the Dundee Insurance Committee had sent out intimations to the deposit contributors, and a large proportion of these had been returned by the Post Office "Not found." It was remarked at a meeting of the Insurance Committee that some of the persons concerned might not get entry into any Approved Society, and if that sort of thing happened periodically a serious defect in the Act would be revealed.

Insurance Act Difficulty in Orkney.

It was reported at a meeting of the Orkney Insurance Committee held on May 30th that doctors in the herring fishing districts had agreed, on certain conditions, to treat insured persons who had come to the county for the fishing season, but that an answer had not been received from the Insurance Commissioners to communications sent to them on the matter. Certain proposals were made to overcome the difficulty of change of address not being intimated by the fishing population. The only doctor in Stronsay, the chief herring fishing port in Orkney, had intimated that he was willing to give his services if a reasonable capitation grant were accorded, but he would not agree to payment on an attendance basis, on account of the amount of clerical work involved. The matter was left in the hands of the Medical Benefits Committee. It is understood that the position of affairs was made known to the Insurance Commissioners last autumn, but it was only within a week or two of the commencement of the fishing that the local committee was consulted.

June 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Birthday Honours.

KNIGHTHOODS have been conferred on Mr. Andrew J. Horne and Mr. Robert H. Woods. Sir Andrew Horne was President of the Royal College of Physicians of Ireland from 1908 to 1910, and is, of course, one of the leading obstetricians in Dublin, and is the present President of the Section of Obstetrics of the Royal Academy of Medicine in Ireland. Sir Robert Woods was President of the Royal College of Surgeons in Ireland from 1910 to 1912, and is at present President of the Irish Medical Association, and chairman of the conjoint committee of this association and the British Medical Association. A well-known laryngologist, he has been President of the British Laryngological Association.

Royal College of Surgeons in Ireland: Election of Officers.

The annual election for the President, Vice-President, Secretary, and Council was held on Monday last, and the following were elected for the ensuing year:—President: Mr. Richard D. Purefoy. Vice-President: Mr. F. Conway Dwyer. Secretary: Sir Charles A. Cameron. Council: Mr. William Stoker, Sir Charles A. Cameron, Sir Lambert H. Ormsby, Mr. Henry Gregg Sherlock, Sir Charles B. Ball, Mr. John B. Story, Sir Thomas Myles, Sir John Lentaigne, Sir Arthur Chance, Mr. F. T. Porter Newell, Mr. Shepherd McCormick Boyd, Sir Robert H. Woods, Mr. Richard Lane Joynt, Mr. R. Bolton McCausland, Mr. Edward H. Taylor, Mr. William Taylor, Mr. R. Charles B. Maunsell, Mr. Trevor N. Smith, and Mr. W. Ireland de Courcy Wheeler. The result of the elections to the Council gave rise to some surprise by reason of its omissions.

The National Insurance Act.

Taking the most favourable view of matters, it cannot be said that in Ireland the National Insurance Act is—since its practical working began—becoming any more popular. In the first place, the absence of medical benefit makes the insured often complain that they are not getting much for their contributions, while the want of provision to meet the tuberculosis benefit has led to great dissatisfaction. Again, the Approved Societies are finding the sick benefit a great drain upon their resources, although the slightest knowledge of Medical State Insurance as it exists in Germany might have prepared them for plenty of malingering; while, finally, the circumstance that outside Belfast hardly any practitioner will accept the scheme put forward by the Insurance Commissioners for the paying of certificates is significant. Further, it is a remarkable fact that in Belfast one effect of the operation of the Act has resulted in an increased number of applications at the several dispensaries for treatment and in the entry into the workhouse hospitals of a large number of insured persons also for treatment. Indeed, a special committee appointed by the Belfast board of guardians to look into the matter report that in their opinion the effects of the Act and its suggested amendment in extending medical benefits will still further result in throwing upon the guardians' resources a larger number of dispensary patients, so that the Poor-law administration will not be relieved, but rather burdened by the operations of the Act and its extensions.

Action against an Approved Society for Sickness Benefit.

In Lisburn, on May 30th, an action was brought against an Approved Society by a shoemaker because he had not been paid sickness benefit for five weeks, to which he alleged he was entitled. The society urged that the magistrates before whom the case was tried had no jurisdiction, as the proper way to bring a case was first to apply to a branch of the society and then appeal to the executive of the branch, and, finally, if the executive decided against the claim the case could be carried to the Insurance Commissioners. For the man, it was contended that he had never received any instructions or documents to fill with a view to making a proper claim. The secretary of the society replied that they had instructed their solicitors to accept service of the summons, and the man had no option, therefore, but to come into court. The chairman of the magistrates said, while they were all agreed that they had no jurisdiction in the case, they also all felt that the man had been very badly dealt with. The case was marked "No jurisdiction." In all industrial centres in Ireland the experience is that those looking for sick benefit are rapidly increasing, so that the Approved Societies may find it hard to meet an unwonted drain upon their resources.

Presentation to a Medical Practitioner.

On the evening of May 30th, in the Memorial Hall, Articlave, co. Derry, in the presence of a crowded audience representative of all parties in the district, Mr. James Steel, M.D. R.U.I., J.P., dispensary medical officer of the Articlave district, was, on the occasion of his recent marriage, presented with a purse of sovereigns and an illuminated address, while a chiming clock was given to Mrs. Steel. Many speeches were delivered most complimentary to Dr. Steel, who for the past 35 years has practised in the neighbourhood, and who has helped to advance every movement calculated to promote the interests of the people there.

June 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Fat Grafting in Cicatricial Depressions of the Face.

ON May 21st M. Morestin brought before the Société de Chirurgie two patients, from the first of whom he had removed four years ago a large epithelioma of the superior maxilla which had invaded the entire orbit, causing exophthalmos. He closed the eyelids to retain the eyeball in its socket, and repaired the buccal floor with a portion of the cheek. But there still remained a considerable depression of the face on the side operated on, so that to restore symmetry to the countenance he grafted under the separated skin a fatty pad taken from the patient's thigh. This fat disappeared, which M. Morestin attributed to the existence of a perforation of the nasal fossa having caused infection of the graft. The second patient, while riding a bicycle rapidly, was thrown on to a vehicle loaded with iron rods, one of which penetrated the left cheek below the eye, causing a considerable loss of substance. M. Morestin had to deal with a small fistula which persisted for many months after the accident and was kept open by infected processes. He removed some teeth, which, however, seemed to be sound; but the fistula closed, and he was able to graft under the skin a mass of fat, taken as before from the patient's thigh. The graft took, and the æsthetic result was perfect.

Medical Munificence.

The Académie Française has made the first award of the Broquette-Gonin prize, of the value of 10,000 francs, to Professor Grasset, of Montpellier, for his collected works. This prize is for the purpose of recompensing the author of a philosophical or literary work adjudged of a character to inspire the love of truth, beauty, and well-being. Not one only, but many, of the works of Professor Grasset fulfil this end, quite apart from his labours in the field of medicine. Professor Grasset has decided to give the amount of the prize to the Faculty of Medicine, to establish a prize for the special works of students.

Anæsthesia with Ethyl Chloride.

On May 15th, before the Société de Thérapeutique, M. Bardet recounted the following case: Having to anæsthetise a patient for the extraction of many teeth, he used the following mixture: ethyl chloride, 60; methyl chloride, 35; ethyl bromide, 5. Anæsthesia was produced by the slow inspiration of the drug mixed with air in less than two minutes and without any restlessness. It lasted about a minute, during which seven or eight teeth were removed. The return to consciousness was extremely rapid, the patient experiencing only the slightest nausea, which lasted perhaps half a minute. To prepare the patient M. Bardet administered, half an hour before the anæsthesia, a dose of demorphinised opium. This sedative, deprived of any lasting narcotic effects, was sufficient to calm the nervous system. A certain amount of calcium chloride, moreover, may be advantageously administered to obviate later an attack of hyperchlorhydria.

Gifts to the Academy of Medicine.

By a presidential decree the Academy of Medicine is authorised to accept under the conditions imposed the legacy left to it by M. Marc Daniel Sée, which consists of the sum necessary to obtain an annual income of 500 francs in the French 3 per cents., for the purpose of founding a prize of 1000 francs, to be awarded every other year to the French author of the best work on the physiology and anatomy of man which has been published during the preceding four years and not previously awarded a prize by the Academy of Medicine or the Institute. Further, the widow of the late Dr. Hervieux, médecin des hôpitaux, who died recently, has bequeathed to the Academy of Medicine, of which her late husband was for long a member, the sum of 100,000 francs, the interest to be awarded yearly to two poor medical students to help them in their studies. These students are to be chosen irrespective of political or religious views by the *doyen* of the faculty and the two senior professors. Madame Hervieux has also bequeathed to the Academy a statuette of her husband.

The Third French-speaking Congress of Legal Medicine.

This Congress was held in Paris from May 24th to 27th, under the presidency of Dr. Vibert. M. Balthazard read a paper on Acute Carbon Monoxide Poisoning, which gave rise to an interesting discussion in which M. Martin, M. Corin, M. Vibert, M. Socquet, M. Thoinot, M. Parisot, M. Nicloux, and M. Kohn-Abrest took part. M. J. Roques de Fursac discussed the chronic form of carbon monoxide poisoning, a somewhat difficult subject in view of the fact that in this condition there is a paucity of elements on which to base a diagnosis. The examination of the blood furnishes no data, so that only clinical evidence remains on which to form an opinion. At a supplementary meeting on May 26th,

held in honour of this congress, the Society of Legal Medicine was attended by most of the members of the Congress. The programme included the means of checking the use of narcotic drugs (opium, morphine, cocaine, ether, haschisch) which now constitutes a social danger. Maître Rocher and M. Régis, M. Vallon, and M. Lacassagne spoke, after which M. Bertillon demonstrated the latest advances in judicial photographometry, and M. Ménard discussed errors of interpretation in radiography.

The Prophylaxis of Gastro-enteritis in Suchlings.

M. Gallois related at the Société de Thérapeutique on May 14th the results of a personal observation. During a very hot summer 12 out of 14 children died on the same day in the crèche of the Hôpital Hérold. Much moved by the waste of life, M. Gallois conceived the idea of having the rooms cooled with large blocks of ice, and this fearful mortality did not recur. Now that this idea has been taken up by other medical men M. Gallois recalled his former experiences.

"Murderous Measles."

If of old time—that is, before the discovery of anti-diphtheritic serum—diphtheria was the greatest enemy of children in France, a disease formerly considered benign—viz., measles—replaces it nowadays in fatality, causing at least as many deaths as, if not more than, diphtheria caused before the discovery of antitoxin. Municipal statistics show in Paris about 30 to 40 deaths a week from measles. In the past six weeks the figures have varied between 21 and 45 deaths, the annual rate oscillating about 900. In 1910 there were 860 deaths in children, in 1911 808 deaths from this cause. An inquiry in the Paris hospitals shows that the death toll of measles varies between 15 and 20 per cent. In two hospitals alone—Saint Joseph and the Hôpital Pasteur—the mortality has not risen above 4 or 5 per cent. This marked difference may be due to the fact that cubicular isolation is practised in these two hospitals. The cause of the increased fatality is to be found principally in the fact that the compulsory notification of measles is followed by no prophylactic measures. It is true that disinfection is of little use, for the microbe dies as soon as desiccation is established. But what would be useful is that hygienic precautions should be taken in the schools attended by children with measles. There is no coöperation between the prefecture of police and the sanitary services of the Ministry of the Interior and of the Ministry of Public Instruction. The lycées are even less defended against an epidemic of measles than are the communal schools, in which a medical service is in operation. If in the hospitals measles kills from 15 to 20 per cent. of sick children it is because they are not isolated. Measles is a benign disease, but the secondary complications, especially broncho-pneumonia and diphtheria, which so frequently follow thereon, cause the greater part of the deaths.

Perforating Nasal Ulcers in Gunpowder Factory Workers.

At the Congrès Français d'Otorhinolaryngologie M. Robert Leroux drew attention recently to the perforating nasal ulcer that occurs in powder workers. This ulcer is found on the cartilaginous portion of the septum in many workers in powder factories. The author noted two kinds of ulcers—one caused by black powder, composed of saltpetre, carbon, and sulphur; the other by the pyroxyline powder of type J, made of gun-cotton with 17 per cent. of the bichromates of ammonium and potassium. The first acts after the fashion of common powders with carbon and saltpetre—viz., by inflicting microscopic traumatisms, but on a mucosa previously irritated by sulphurous compounds; the other, by the action of the chromates, produces an ulcer through nerve injury. The evolution of the perforating ulcer of powder workers occurs in three stages: the formation of xanthosis, a dirty, yellow state of the mucosa from internal hæmorrhages; formation of an ulcer; and perforation. The perforation due to black powder requires many months for completion, while that due to powder J may be complete in eight days. A few crusts and blood-clots are rarely taken notice of. The perforating ulcer is painless, and must be intentionally looked for. The preventive measures recommended are the wearing of a mask and the limitation of working hours. Treatment lies in neutralising the chromic salts.

June 3rd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Quinine in Scarlet Fever.

AT the meeting of the Royal Academy of Medical Sciences of Palermo on April 26th some interesting observations on this subject were brought forward. During the antimalarial campaign of the Croce Rossa in Sicily last autumn there was an epidemic of scarlet fever in the neighbourhood of Marsala. It was observed that the districts under the care of the officers of the Croce Rossa were exempt from this epidemic, though they only differed from the surrounding districts in the fact that their population was under the influence of quinine administered regularly for prophylaxis against malaria. In view of the theory of the protozoal origin of the infection of scarlet fever, during another epidemic in the spring of this year at Palermo, a certain number of cases were treated by injections of bichloride of quinine in large doses. The cases were few in number, but for the most part of a certain gravity, and in all of them the injections seemed to cut short the disease. The fever yielded to the second or third injection, desquamation appeared quickly, and the patients were very soon well.

A New Tuberculosis Cure.

Professor Alessandro Bruschettini, of Geneva, presented a communication to the University of Parma in the amphitheatre of the Clinica Medica on May 17th on the subject of a new cure for tuberculosis. This is a so-called "vaccine serum," of which he described the method of preparation. He claims to have obtained such wonderful results in the cure of hundreds of cases of the various forms of tuberculosis that it may be fairly considered a sure and specific cure. He proposes to make an announcement on the subject at the forthcoming International Congress of Medicine in London.

A Professor of Pathology and the Waters of Lourdes.

Professional circles in Genoa have recently been agitated by the publication in the "Journal of the Grotto" of Lourdes of a testimonial written by a member of their University. Dr. Luigi della Valle, professor of surgical pathology in the University of Genoa and surgeon to the hospital, accompanied his wife, whose illness professional skill had failed to cure, to Lourdes last autumn. The effects of the waters corresponded promptly to the lady's hopes and prayers, and in recognition of this her husband was persuaded to sign the following declaration: "I, the undersigned, certify that in the month of September, 1912, my wife, who was seriously ill in consequence of a typhoid infection, complicated by intestinal obstruction, refractory to ordinary therapeutic measures, was in danger of imminent death. She experienced the first symptom of improvement immediately after swallowing a few draughts of the miraculous water of Our Lady of Lourdes, this act of faith being accompanied by the prayers of the patient and of the members of her family. I make this attestation in token of gratitude towards Our Lady of Lourdes." The declaration appears in the *Journal de la Grotte* of May 4th, with the doctor's signature and academic titles, though the doctor had signed it merely as doctor of medicine, and had been under the impression that the declaration would remain private. In Italy, where the antagonism between science and superstition is more bitter possibly than anywhere else in Europe, it is natural that the publication of this document should have aroused much resentment in the scientific circles affected.

May 30th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Vienna Volunteer First-aid Association.

THE First-aid Congress to be held in this city next September has been organised chiefly by the exertions of the well-known Vienna Volunteer First-aid Association, called here the Freiwillige Rettungsgesellschaft, the annual report of which for the year 1912 has just been published. During that year a very great amount of work was accomplished. The number of cases which received attention amounted to

35,920, or about 100 per day. The services of the association are called for chiefly by the police and by medical practitioners when an accident has happened or when a case of sudden illness requires prompt intervention by trained persons. No fewer than 6971 such emergencies occurring in the street or in public buildings, when the assistance of a medical man in general practice was not at once obtainable, were dealt with by the association, and 12,663 persons suffering from injuries caused by accidents were taken care of and brought to the hospitals; 327 persons deranged in their minds were also removed to the asylums. The association established temporary ambulance stations in 124 places on the occasion of fires, public gatherings, pageants, popular festivals, and the like. In 1387 instances of attempted or completed suicide a call was sent to the association, and its prompt response was the means of saving the lives of many who would have otherwise perished by their own hands. The details of these suicides and suicidal attempts are of interest from the psychological point of view on account of the variety of the methods of self-destruction resorted to. Poison was selected by 537 persons, or nearly 50 per cent.; 276 (20 per cent.) shot themselves with various weapons; 130 (10 per cent.) used knives and daggers; 130 drowned or tried to drown themselves; 129 resorted to hanging; 100 persons jumped from various heights; and 80 inhaled illuminating gas. Of the other calls, the accidents were also very instructive: 1465 victims of modern street traffic and 1532 persons injured in industrial employments (including factories) show how much still remains to be done in regard to public safety. Among accidents of other kinds entered under this heading there are 488 cases of burning by ignited combustibles, 456 accidents to builders' workmen, and 618 cases of injuries due directly to alcoholism. Electricity caused 29 deaths and over 100 persons were either bitten or trampled upon by animals. The number of calls to schools or to persons found suffering from the effects of starvation or exposure to cold (90 such cases) are also given. The public applied to the association in over 6800 cases, whilst the remainder were "official calls." An important feature of the work of the association is the formation of so-called "Samaritan" classes, in which instruction in rendering first-aid is given. These classes are open to any person above the age of 14 years, and have been very favourably received by all sections of the population. They last about eight weeks each, and the pupils are taught how to give first-aid in cases of poisoning and wounds or other injuries caused by direct violence or by accidents with chemicals or by burning; they are also instructed in the resuscitation of the apparently drowned and the victims of coal-gas poisoning or violent electric shocks, but the association does not interfere with the work of the private practitioner, with whom it has always tried to keep up the best relations. The pupils before they leave the class have to pass an examination in order to show that they have learned what they are expected to do in case of need. Lately the police have been required to attend these classes in turn. The association is an essentially private organisation supported by voluntary contributions, and various attempts to bring political, racial, or religious ideas into the foreground have hitherto been successfully overruled as being in direct opposition to the leading idea of the institute: "first aid to the sufferer."

Securing Hospital Beds for Urgent Cases.

The occurrence of two sad cases in which two persons died in the street while vainly seeking admission into hospitals where there were no vacant beds has caused an outburst of public indignation against the bureaucratic management of the hospitals. A magisterial order to the following effect has therefore been issued. Any patient in Vienna deemed by a medical man to be in urgent need of hospital treatment or being otherwise in danger of death must be received in one of the hospitals. The police will be required to secure a bed for the patient as soon as a written notice from the practitioner in attendance stating the urgency of the case is produced. No refusal is possible. For this purpose a central office for vacant beds has been opened. This office is at once informed of every bed becoming vacant or being filled in any of our public hospitals or charitable institutions. By these means any recurrence of the above-mentioned incidents will become impossible.

May 31st.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

The College Student in India.

THE appearance of a general report by the secretary of the inspection committee of the Punjab University, dealing with what may be termed the social side of college life, is of considerable interest. It is a phase which few educationists have the time to study, but which must soon demand closer attention, and a general survey of the collegiate life outside the lecture-room by a sympathetic enthusiast must demand close consideration from all who are interested in medical education in India. The general conditions of social life in 21 colleges are examined in great detail in this report. Of nearly 3800 students on the rolls of these colleges some 2214 are in hostels—that is, only about 59 per cent. are under any kind of control. This is an improvement on the state of things existing some ten years ago, and the boarding-houses themselves have much improved, although there is unfortunately still too much foundation for the verdict that for the most part the hostels are merely so much sleeping accommodation, a few containing additional accommodation for meals. There are, of course, exceptions, but the general impression after careful investigation is that attention has so far been concentrated on class-rooms and laboratories. The possibilities and advantages of a common corporate life under the control of the college have been fully admitted, but there has been wanting either the incentive or the means to realise them. The blame cannot be fixed entirely on the university or the college authorities. There has been wanting that interest of the students themselves; there has certainly been indifference on the part of parents and guardians. The question is largely a matter of money, and there has been ample evidence lately that any increased demand in the way of slightly higher fees for medical education is immediately resented. An improvement must be insisted on sooner or later: the prevalent indifference cannot longer be tolerated. The State is prepared to undertake its share in facilitating improvements, but the communities, which should be as closely concerned as the Government, must do more than talk and write. Out of the 29 separate hostels belonging to the colleges only four have set apart any room in which the social side of hostel life can find expression or development. The consequence is that, to say the least, the evenings of most of the students must be very monotonous. After the afternoon games are over they must huddle together in dimly-lighted, smoky kitchens for their evening meal; after this there is no place to go to except to their rooms for the half hour just following the taking of food and before the evening work begins. Another result is said to be that most undergraduates in India are losing the training in manners, the development of habits of regularity, and the acquisition of an *esprit de corps* that would come from sitting down together to a common meal. It is recognised that there are difficulties in providing social centres in hostels, especially as regards the want of space, and yet it has been found that at least five colleges have the necessary rooms, but lying vacant. The question is one for the ardent reformer, and these are not wanting in the faculties of every university in India, but unfortunately the question to which they have hitherto devoted least attention has been the social side of Indian university life.

Childbirth Mortality in Sind.

The Bombay Government has just sanctioned a grant of £5000 for the maternity ward at the Dufferin Hospital, Karachi. The official note recommending the grant makes the following striking statement:—

> The mortality of women in childbirth throughout Sind is appalling, and in the case of survivors permanent ill-health is often the result of the ill-treatment which they receive through ignorant management. Little has yet been done to demonstrate to the people the benefits of Western science in midwifery.

The Bombay Sanitary Institute.

The annual meeting of the Bombay Sanitary Association was held recently. The annual report shows an interesting record of progress, noticeably that provisional plans have been prepared for the new home of the institute in Princess-street. It is intended to put the work in hand as soon as the plans have passed the committee of the Bombay

Sanitary Association and have the necessary approval of the Government of Bombay, who are large contributors to the cost of the new institute. Some £1400 is still required if the work of building is to be started free of debt, but the association confidently anticipate that this will speedily be forthcoming, and it is hoped that the foundation stone of the building will be laid by His Excellency the Governor at an early date.

Fifty Lakhs for Charity.

It is announced in Bombay that a Parsi gentleman, whose name is not disclosed, is arranging to make a charity trust of 50 lakhs of rupees. It is stated that he will give effect to his wishes in a short time, and that the administration of the charity will remain under his supervision during his lifetime.

The Vicereine and Indian Hospitals.

Her Excellency the Lady Hardinge has decided to devote the money that has been placed at her disposal as a thank-offering for the Viceroy's recovery to giving an annual treat to children in hospitals on the Viceroy's birthday. June 20th will therefore be kept as a "Children's Day" throughout our Indian hospitals. Lady Hardinge has also been making a round of the Simla hospitals. A few days ago Her Excellency visited the Station Hospital and Station Family Hospital at the important military suburb at Jutogh. The Viceregal party were conducted round the hospitals by the senior medical officer, Major R. J. Blackham, V.H.S. Her Excellency was much interested in what she saw, and promised her assistance in carrying out various projected improvements.

Combating Disease in Mysore.

The Government of Mysore has just issued an order prohibiting the erection of temporary sheds and huts on Government agricultural land near railway stations with a view to preventing the spread of epidemic diseases, and directing the removal of such sheds or huts on private land where necessary.

Rice Cultivation Prohibited.

It is notified in the current *Punjab Gazette* that the cultivation of rice crops is prohibited in the neighbourhood of Muzzafagarh, as being injurious to the health of persons dwelling in the neighbourhood, and as being likely to contaminate the water-supply of the municipality.

The Sanitation of Madras.

Owing to the defective sanitary arrangements in Madras the death-rate is said to have been steadily increasing during the last 40 years. The existing drainage system consists of open side drains, masonry drains, and pipe drains. The open drains are insanitary, the masonry drains are leaky and defective, and the pipe drains are inefficient, rendering the whole system a menace to the inhabitants.

The Mysteries of Plague.

A Bombay newspaper says that one of the mysteries of plague has always been the reason why the incidence of epidemics is so much heavier in some places than in others. In the last two years the special point of inquiry has been why the United Provinces should suffer as severely as they do, and particularly so at a time when other parts of India are feeling a general lightening of the burden. Madras has always escaped easily. One theory put forward regarding Madras was that the mongoose was very prevalent there and kept down the numbers of the plague rat. Madras sanitarians, of course, attach much credit to their special passport system of guarding against imported contagion. The advisory committee in India have recently published a report of a special inquiry made in Madras on the subject. The document may fairly be summed up as saying that Madras has the conditions that go to make a bad plague centre, but that why the ordinary results do not follow is more than the experts can say. The inquiry is now to be pursued outside Madras city into various parts of the Presidency, where the same comparative freedom from plague exists but is equally difficult to explain.

May 3rd.

ARGENTINE MEDICAL SOCIETY.—Dr. Marcelo Viñas has been re-elected President for the commencing session, Dr. Juan Carlo Llames Massini and Dr. Castelfort Lugones being elected respectively Vice-president and general secretary.

Medical News.

UNIVERSITY OF LONDON.—At the Third (M.B., B.S.) Examination for medical degrees held recently the following candidates were successful:—

Honours.—Francis Eldon Daunt (*e*), St. Thomas's Hospital; Philip Vanner Early (*e*) and Aubrey Goodwin (*a*) *, University College Hospital; Adrian Leonard Moreton (*d*, *e*) (University medal), St. Bartholomew's Hospital; Donald Ewart Morley (*a*), London Hospital; and William Leslie Webb (*b*), Guy's Hospital.

(*a*) Distinguished in medicine. (*b*) Distinguished in pathology. (*d*) Distinguished in surgery. (*e*) Distinguished in midwifery and diseases of women. * Obtained the number of marks qualifying for the University medal.

Pass.—Edward Bach, University College Hospital; Helen Patricia Barnes, London (Royal Free Hospital) School of Medicine for Women; Arthur Barrett Cardew, Middlesex Hospital; John Henry Cobb, University of Sheffield; Henry St Clair Colson, Westminster Hospital; Gordon Covell, Guy's Hospital; Lionel Gordon Crossman, St. Bartholomew's Hospital; George Rowland Dobrashian, University College Hospital; John Adamson Edmond, Guy's Hospital; Andrew Royston Elliott, London Hospital; Alexander Lindsay Fitzmaurice, Guy's Hospital; Frank Rex Fletcher, London Hospital; Geoffrey Troughton Foster-Smith, Guy's Hospital; Cecil Rhodes Harrison, St. Mary's Hospital; Robert Francis Hebbert, St. Thomas's Hospital; Reginald Gordon Hill, St. Bartholomew's Hospital; Harold William Hills, B.Sc., and Robert Lister Horton, University College Hospital; Charlotte Grace Judge, London (Royal Free Hospital) School of Medicine for Women; Skene Keith, Guy's Hospital; Francis Harry Kelly, Middlesex Hospital; Charles Dones Killpack, Guy's Hospital; James Duncan Lyle, London Hospital; Gerald Roche Lynch, St. Mary's Hospital; George Sefton Miller, Guy's Hospital; Percy James Montgomery, Middlesex Hospital; Edith Mary Nesbitt Moss, London (Royal Free Hospital) School of Medicine for Women; William David Owen, St. Bartholomew's Hospital; George Harold Pearson, London Hospital; Hugh Ridley Prentice, St. Bartholomew's Hospital; George FitzPatrick Rigden, Westminster Hospital; William Robinson and John Alfred Ryle, Guy's Hospital; Walter Salisbury, University of Bristol; Frederic Sanders, London Hospital; William Barwise Sanders, University College Hospital; Arthur Richard Sharrod, London Hospital; Arthur Joseph Eagleton Smith, Guy's Hospital; Margaret Edith Elliott Smith, London (Royal Free Hospital) School of Medicine for Women; William Henry Dakin Smith, University College; William Collis Spackman, St. Bartholomew's Hospital; Mary Alice van Ingen, London (Royal Free Hospital) School of Medicine for Women; Ernest Wentworth Wade, University of Bristol; John Richard Menzies Whigham, St. Mary's Hospital; Noel Tancred Whitehead, St. Thomas's Hospital; Thomas Davies Williams, London Hospital; Alan Wilson, University College Hospital; and William Wallace Wood, London Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* The eminent dentist, Dr. Paul Ritter, who is also well known as a scientific investigator and also as a municipal reformer, has been granted the title of Professor.—*Berne:* Dr. E. Landau has been recognised as *privat-docent* of Anatomy.—*Bordeaux:* Dr. Abadie has been appointed Professor *agrégé* of Mental Diseases, Dr. Aubaret Professor *agrégé* of Ophthalmology, and Dr. Réchon Professor *agrégé* of Biological and Medical Physics.—*Budapest:* Dr. M. Goldzieher has been recognised as *privat-docent* of Pathological Anatomy and Dr. K. L. Lang as *privat-docent* of Rhinology.—*Danzig:* It is proposed to establish an Academy of Practical Medicine similar to those of Cologne and Düsseldorf.—*Dresden (Technical University):* Dr. H. Conrad has been recognised as *privat-docent* of Bacteriology.—*Hamburg:* An important and well-equipped electric-light department has been established in connexion with the Eppendorf Hospital. There are 25 beds and arrangements for the treatment of 100 out-patients for lupus daily. The director is Dr. Wichmann.—*Jena:* Dr. J. Zange has been recognised as *privat-docent* of Otology.—*Kiel:* Dr. E. Koujetzny has been recognised as *privat-docent* of Surgery.—*Limoges:* Dr. Duverger has been appointed Assistant Professor of Anatomy and Physiology.—*Montpellier:* Dr. Delmas has been appointed Professor *agrégé* of Anatomy and Embryology.—*Toulouse:* Dr. Picqué has been appointed Professor *agrégé* of Anatomy and Embryology, and Dr. Escande Professor *agrégé* of Biological and Medical Physics.—*Vienna:* Dr. E. Abderhalden, Professor of Physiology in Halle, has been offered and has accepted the chair of Medical Chemistry, in succession to Dr. E. Ludwig, who is retiring.

DONATIONS AND BEQUESTS.—The late Mr. Augustine Knocker, of Clifton, left £100 to each of the following institutions: Bristol General Hospital, Royal Infirmary, Children's Hospital, Eye Hospital, and Blind

Asylum.—By the will of the late Mr. George Southern, the testator left £1000 each to the Preston and Lancashire Royal Victoria Infirmary and the Wigan Infirmary, for the endowment of beds.—Mr. Arthur James, of Cotton House, Rugby, has given the income of a sum of £20,000 for the purpose of cancer research to the Middlesex Hospital as a memorial to his brother, the late Mr. William James.

NEW NAVAL HOSPITAL AT BUENOS AIRES.—The Argentine Government has now approved the plans of the engineer, Señor Dobranich, for a new naval hospital to be erected near the Puerto de la Plata. It is estimated to cost two and a half million dollars, and will be very complete with laboratories and radiographic and other departments.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Charles H. Knight, formerly professor of laryngology in Cornell University Medical College, New York.—Dr. R. Dick, *privat-docent* of gynæcology in the University of Berne.—Dr. Hermann Bennecke, *privat-docent* of medicine in the University of Jena.—Dr. Lehmann, privy medical councillor of Hameln.—Dr. Camillo Verdelli, *privat-docent* in the University of Parma.—Dr. F. von Koranyi, Member of the Hungarian Upper House, formerly professor of medicine in the University of Buda-Pest, at the age of 85.—Dr. S. Jaccond, formerly professor of clinical medicine in Paris and member of the Academy of Medicine, aged 82.

LEICESTERSHIRE AND RUTLAND PUBLIC MEDICAL SERVICE.—The first annual meeting of the members was held at the central buildings of the service, Bond-street, Leicester, on May 23rd. The chair was taken by Dr. R. Wallace Henry. The following were elected officers for the year:—Chairman: Dr. R. Wallace Henry. Vice-Chairman: Mr. J. B. Pike. Treasurer: Dr. Astley V. Clarke. Secretary: Dr. T. Arnold Johnston. The treasurer presented a report of the legal and other expenses associated with starting the service, and explained how they had been met from a guarantee fund. Reports were received from the 11 subdivisions of the service, showing that the following had become subscribers during the first quarter: Leicester borough, 47,800; Ashby and Bosworth, 6500; Barrow-on-Soar, 1800; Blaby, 5000; Coalville, 10,000; Hinckley, 2384; Loughborough rural, 1750; Loughborough urban, 5137; Market Harborough, 1000; Malton, 5250; Rutlandshire, 2500; a total of 89,121 uninsured persons. The secretaries stated that in some districts in which collectors had been unknown formerly members were slow in joining during the first few months, but as the service became more widely known the numbers were increasing rapidly; all the speakers expressed satisfaction with the altered conditions.

DURHAM UNIVERSITY MEDICAL GRADUATES ASSOCIATION.—A dinner of this association was held at the Criterion Restaurant, London, on May 30th, under the chairmanship of Dr. F. W. Edridge-Green, the President. After the loyal toasts had been honoured, Dr. R. A. Bolam proposed the toast of "The Navy, the Army, and the Reserve Forces," and coupled with it the names of Surgeon-General A. W. May, the newly-appointed Medical Director-General of the Royal Navy, and Surgeon-General Sir Launcelot Gubbins, Director-General of the Army Medical Service. Surgeon-General May, in reply, said that the Naval Medical Service, which combined in itself the two finest vocations and which was so largely responsible for the *personnel* of the navy, was worthy of the best from the medical schools. Sir Launcelot Gubbins referred to the interesting fact that three great soldiers, Sir John Moore, Sir Harry Smith, and Sir John Nicholson, were all sons of doctors. The toast of the "University of Durham and its Medical Graduates' Associatoin" was in the able hands of Dr. F. M. Sandwith, Vice-President of the Association, and Sir George Hare Philipson, Vice-Chancellor of the University, responded in eloquent terms. The health of "The Visitors" was proposed by Dr. F. S. Palmer, who made graceful reference to the various guests, and Sir Francis Champneys suitably replied. Professor E. H. Starling, in submitting the health of "The Chairman," paid a very warm tribute to Dr. Edridge-Green's enthusiasm and perseverence in the face of opposition. He said that Dr. Edridge-Green's theory had at last come into its own after years of neglect. The toast was received with acclamation, and the chairman briefly responded. During the evening an excellent programme of music was provided under the direction of Mr. John Ivimey. The honorary secretaries, Dr. R. H. Smallwood and Mr. Bryden Glendining, are to be congratulated on a successful dinner.

THE usual breakfast will be given by the National Temperance League at the annual meetings of the British Medical Association at Brighton. The breakfast will take place in the Banqueting Hall of the Royal Pavilion on Thursday, July 24th. The President-Elect, Dr. W. Ainslie Hollis, will preside, and Dr. Mary Scharlieb is announced to speak.

PRESENTATION TO A MEDICAL MAN.—At Culmstock, Devon, Mr. William Horton Date, M.R.C.S. Eng., L.S.A., was recently presented with an oak sectional bookcase, Chesterfield settee, cabinet, and mirror, as a mark of respect and esteem on the occasion of his departure for Barnstaple to take up the appointment of medical inspector of schools under the Devon county council.

GUY'S HOSPITAL: THE NEW BUILDINGS.—On Tuesday, June 3rd, Guy's Hospital was *en fête*. After luncheon in the Court Room, presided over by Mr. Cosmo Bonsor, the new buildings of the medical school, now completed, were declared open by the Right Hon. A. J. Balfour, M.P. The buildings were described in our columns last week. The ceremony was performed in the physiological theatre, under the chairmanmanship of Viscount Goschen and in the presence of a large and distinguished gathering. Lord Goschen, in welcoming Mr. Balfour, pointed out that the medical school had been built and equipped without aid from the hospital resources. Mr. Balfour's inspiring address, dealing mainly with the need for the endowment of research, was enthusiastically received, and a vote of thanks was proposed by Dr. W. Hale White, senior physician, and seconded by Sir W. Arbuthnot Lane, senior surgeon, who was loudly applauded in recognition of the baronetcy conferred upon him that day. After the ceremony a garden party was given by the governors and medical staff in the hospital grounds.

THE CREMATION SOCIETY OF ENGLAND.—The report of the council of this society for 1912 (the thirty-ninth year of its existence) states that during the 12 months 125 cremations were carried out at the society's crematorium near Woking, as compared with the 114 for the year 1911. The total number of cremations in 1912 for Great Britain was 1134, as compared with 1023 for 1911. Of this total 591 took place at Golder's Green. The large numbers of inquiries hitherto received at the society's office from persons of every class seeking information about cremation were fully maintained in 1912, and there appears to be every reason for believing that increased public attention is being directed to cremation in each succeeding year. The council records with deep regret the loss by death of Lord Ilkeston, vice-president of the society. Amongst those who were cremated during 1912 were Sir Frederick Wallis, Sir Henry Butlin, Bart., and Mr. John Troutbeck, coroner for Westminster. The president of the society is Sir Charles Cameron, Bart., M.D.; and the Right Hon. Robert Farquharson, M.D., Sir John Tweedy, and Sir Anderson Critchett, Bart., are among the vice-presidents. The offices are at 324, Regent-street, London, W.

THE IMPERIAL SERVICES EXHIBITION.—A preliminary view of the Imperial Services Exhibition at Earl's Court, which was announced to open on May 31st, was given to representatives of the press on May 29th. The principal feature was a rehearsal of the display of naval and aerial warfare in the Empress Hall. The scene and lighting effects were excellent, but the programme itself was unavoidably curtailed in comparison with what the show will be when everything is complete. The movements of the warships—all models of actual vessels in the Navy—and particularly those of an airship controlled by wireless, were very interesting. The incompleteness of the arrangements on this occasion precludes any useful summary of the naval and military medical exhibits, which will undoubtedly form

an attractive feature for medical men. The Red Cross Society hospital, near the West Kensington entrance, contains much of interest and was very near completion—opposite to it, on a railway siding, was a hospital train, equipped with spring cots (fixed to the sides, not slung) and accommodation for the staff. We forbear further description until the medical portion of the exhibition is further advanced and the various stalls and displays of drill and so forth can be described.

FOURTH INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.—This Congress will be held at Buffalo, U.S.A., next August. The organising committee for Great Britain and Ireland is under the presidency of Sir Lauder Brunton. The honorary secretaries are Dr. James Kerr and Mr. E. White Wallis, to whom communications may be addressed at 90, Buckingham Palace-road, London, S.W. The Congress will last from August 25th to 30th. It will be under the patronage of the President of the United States, Dr. Woodrow Wilson.

INTERNATIONAL COMMITTEE FOR POST-GRADUATE MEDICAL EDUCATION.—A series of lecture courses on the Progress of Practical Medicine will be given in Berlin by the Lecturers' Association for Medical Vacation Courses from June 19th to 28th, in collaboration with the Central Committee for Medical Post-Graduate Education in Prussia. Foreign practitioners are also entitled to participate. Applications should be sent to the Bureau of the Lecturers' Organisation for Medical Vacation Courses (Mr. H. Melzer, Berlin N.24, Ziegelstr. 10/11). Inquiries will be answered by the Bureau of the Lecturers' Organisation and by the Medical Information Bureau of the Kaiserin Friedrich-Haus (Berlin N.W. 6, Luisenplatz 2–4).

THE RANKING MEMORIAL.—It has been decided that the memorial to Dr. J. E. Ranking, who did so much towards the relief of the sick and suffering poor of Tunbridge Wells, shall take the form of the endowment of a bed in the General Hospital at Tunbridge Wells, in which Dr. Ranking was specially interested and of which he was senior physician. The public appeal for subscriptions to provide some suitable memorial met with such a ready and willing response that a sum of £1273 15*s.* 8*d.* was collected in amounts varying from ½*d.* to 100 guineas. The sum of £1000 has been set aside for the endowment of the bed, and the balance will be devoted to providing a medallion at the hospital, to be placed over the bed, the sum then remaining to be given to the Samaritan Fund.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on May 22nd, with Sir Francis H. Champneys in the chair. A letter was considered from the clerk of the Bedfordshire county council suggesting that the rules should be amended so as to entail an obligation on the midwife to advise medical assistance in any case in which the patient's temperature rises to above 100° F. in the morning on two successive days. The Board directed that the clerk of the Bedfordshire county council be informed that his suggestion will be noted for consideration at the next revision of the rules. A letter was considered from the medical officer of health for the county of Durham asking the opinion of the Board as to whether an uncertified person attending a woman in her confinement in company with a registered medical practitioner, and afterwards alone attending the mother for ten days without supervision from the medical practitioner, is guilty of an offence under Section 1 (2) of the Midwives Act, 1902. The Board decided that the medical officer of health for the county of Durham be informed that under the circumstances described by him the uncertified woman appears to have acted as a monthly nurse and not as a midwife. A letter was considered from the clerk of the Hants county council calling the attention of the Board to the system adopted by a midwife approved by the Board for training pupils in sending a pupil to act as her substitute in nursing a patient after her confinement. The Board directed that the clerk of the Hants county council be informed that the Board has carefully considered the facts as stated in his letter, but it does not think that they prove that the midwife did not exercise adequate supervision, nor that the pupil was acting as an uncertified midwife.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Liverpool Corporation Bill.

SEVERAL important clauses relating to matters of public health in the Liverpool Corporation Bill have been passed by the Local Legislation Committee of the House of Commons. Dr. HOPE, the medical officer of health, gave evidence supporting these provisions. One of the clauses accepted by the committee extended the powers of the officers of the health committee to take samples of food in storage, and another prohibited the sale of inedible fats as foods. A proposal which the committee passed related to the removal of persons suffering from pulmonary tuberculosis to hospital if the lodging or accommodation available for them was such that proper precautions could not be taken to prevent the spread of infection. The removal could only be made on the order of a court of summary jurisdiction, and the clause was to remain in force for three years. Dr. HOPE remarked that its object was to deal with homeless wanderers. Under another clause it was forbidden to bring live rats ashore from ships except for the purposes of examination by the city bacteriologist. This step was taken to safeguard the port from the infection of plague, which rats conveyed. At the suggestion of the Home Office a new clause was submitted prohibiting the keepers of common lodging-houses from receiving persons suffering from trachoma or other contagious disease of the eye. Subject to the report of the Local Government Board the committee intimated that it would accept this proposal.

Amendment of the National Insurance Act.

Details of the Bill which the Government will introduce to amend the National Insurance Act are in the meantime strictly withheld. However, it is stated that the measure will be of wider scope than was contemplated some time ago, and that its discussion is likely to cover three or four Parliamentary weeks.

Petitions of the Royal Sanitary Institute.

Petitions to the House of Commons have been presented by the Royal Sanitary Institute in favour of the Daylight Saving Bill, the Death Registration and Burials Bill, the Elementary Education (Defective and Epileptic Children) Bill, the Mental Deficiency Bill, the Milk and Dairies Bill, and the Milk and Dairies (Scotland) Bill.

Voluntary Contributions under the National Insurance Act.

It is stated by Mr. MASTERMAN that the number of voluntary contributions under the Insurance Act is only 20,500.

HOUSE OF COMMONS.

WEDNESDAY, MAY 28TH.

The New Medical Officer of Health of the City of London.

Mr. HUNT asked the Secretary to the Treasury whether his attention had been called to the statement that Dr. Howarth, the new medical officer of health of the City of London, had been voted an honorarium of 200 guineas by the Insurance Committee for Kent; and could he say whether the Kent Insurance Committee had power to vote honorariums out of insurance funds provided by the people of this country.—Mr. MASTERMAN replied: I am informed by the Insurance Committee that the sum mentioned was voted by them in consideration of the services rendered by Dr. Howarth as medical adviser of the committee from the time when it was constituted in June, 1912, until March 25th last. The work performed by Dr. Howarth during this time obviated the necessity of the committee obtaining alternative expert professional assistance which would otherwise have been necessary for the administration of sanatorium benefit, and which would probably have cost much more than the sum paid to Dr. Howarth. Similar payments to medical officers of health for services of a like character have been voted by many other Insurance Committees and have been approved by the Commissioners.

The Mental Deficiency Bill.

Mr. MCKENNA, the Home Secretary, in moving the second reading of the Mental Deficiency Bill, said that the need for some legislation to deal with the feeble-minded was widely recognised. The Bill of last year had been criticised in the Standing Committee, and some of the changes then made were included in the Bill now before the House. The whole charge for mentally defective persons, whether lunatics, idiots, imbeciles, or feeble-minded, was now proposed to be placed under a single Board of Control. The Board would consist primarily of the existing eight paid Lunacy Commissioners. It was proposed that there should be altogether 12 paid and three unpaid Commissioners. One at least must be a woman. The Board of Control would deal with all forms of mental deficiency. He had gone as far as was consistent with the maintenance of the principle of compulsion to meet objections which had been raised by honourable Members in committee last year. It was the case that last year the persons to be dealt with included persons who might be classed as coming under the definition of the Bill by a subsequent order of the Secretary of State. That portion of the Bill was omitted now, and the Bill, so far as the definition went, was limited to what was actually laid down in its text. No power was given to the Home Secretary to extend the operations of the measure except by introducing a new Act of Parliament. The local authority would have no duty imposed on it except that in which the State bore one-half the cost. He expected that immediately about 20,000 to 30,000 persons would be provided for in one form or another under the Bill.

Mr. BOOTH moved the rejection of the Bill.

After discussion, in which contrary opinions of the Bill were expressed, the further debate was adjourned.

THURSDAY, MAY 29TH.

Opium Convention.

Mr. THEODORE TAYLOR asked the Secretary of State for Foreign Affairs whether a further international conference on the question of opium and kindred drugs was to be held at The Hague, as provided by the Convention of 1912, and, if so, when; whether he was able to state by whom Great Britain would be represented; and whether the British delegates would be instructed that this country was ready to ratify the Convention of 1912 and to introduce legislation in order to give effect to it.—Sir EDWARD GREY answered: The reply to the first part of the question is in the affirmative, and as at present arranged the delegates will meet early in July. The British delegates will be Mr. William Max Müller and Sir William Collins, both of whom were delegates at the last conference. Before any decision can be come to as regards ratification it will be necessary for the conference to consider the replies which have been received from the Powers who did not sign the Convention.

Ireland and the Mental Deficiency Bill.

Mr. T. W. RUSSELL, on behalf of Mr. BIRRELL, Chief Secretary to the Lord Lieutenant of Ireland, informed Mr. SHEEHAN that several resolutions and representations in favour of the extension of the Mental Deficiency Bill to Ireland had been received, but the right honourable gentleman was aware that there were also objections in some quarters to its extension. He was giving the matter very careful consideration, and would be very glad if agreement were come to on the subject.

Fishermen and Medical Benefit.

Mr. FELL asked the Secretary to the Treasury whether his attention had been called to the position of fishermen under the National Insurance Act that they received no benefits under the Act when they were away from their home port; that the panel doctors refused to recognise their cards and to treat them at other ports near the grounds where they might be fishing; and that, as they were away for something like nine months in the year, they paid the same as other persons residing in the same town and received about one-fourth of the benefits; and, if so, what action he would take to remove the alleged grievance.—Mr. MASTERMAN said in reply: Benefits under the Insurance Act are not withheld from fishermen except where they are entitled to medical attendance and maintenance during sickness from their employer. Arrangements have been made whereby any insured persons, including, of course, fishermen, can, when absent from their usual place of residence, obtain medical attendance and treatment from doctors on the panel in the area in which they are temporarily resident. A society which admits fishermen or seamen can make special arrangements for enabling its members to obtain medical attendance at any port in the United Kingdom on the production of their cards.

Mr. FELL: Does the right honourable gentleman suggest that the fishermen on presenting their cards can get medical attendance from panel doctors?—Mr. MASTERMAN: Yes, under arrangements made, fishermen can obtain attendance from panel doctors without payment.

MONDAY, JUNE 2ND.

Amendment of the National Insurance Act.

Mr. GODFREY LOCKER-LAMPSON asked the Prime Minister whether the forthcoming National Insurance Act amending Bill would be a comprehensive measure dealing with amendments that the working of the Act had shown to be advisable, or whether it would merely be a Bill to enable the Government to tide over certain temporary financial difficulties.—Mr. ASQUITH replied: I am not prepared to anticipate the terms of the Bill.

Reports on the National Insurance Act.

Mr. MASTERMAN (Secretary to the Treasury) informed Mr. JAMES HOGGE that he hoped to present to Parliament the reports of the Insurance Commissioners on the administration of the National Insurance Act within a few days. The report would be in a single volume covering the operations of the Joint Committee and the several Commissions, but he was arranging for the reports of each of the national Commissions to be available in separate volumes.

Hospitals and Maternity Benefit.

Mr. MACCALLUM SCOTT asked the Secretary to the Treasury whether an unmarried mother who went to a hospital for her confinement and who had to pay a fee for admission to the hospital could have the amount of that fee refunded to her out of the maternity benefit.—Mr. MASTERMAN answered: Yes, sir. If the sum that would have been due as maternity benefit had the woman not entered a hospital is not applied for the relief or maintenance of the woman's dependents, or paid direct to the hospital under an agreement previously concluded to pay for her treatment, it is payable to the woman herself when she leaves the hospital, either in kind or in instalments or in a lump sum as the society may determine, and such money may be available for repayment of the fee for admission.

Maternity Benefit.

Mr. GODFREY LOCKER-LAMPSON asked the Secretary to the Treasury at what time sickness benefit terminated in favour of maternity benefit; whether, when an employed woman was approaching her confinement and was certified a month before confinement to be incapable of work, she was entitled to sickness benefit, and up to how long before confinement; and whether such a woman ceasing work one week only before her confinement would receive sickness benefit.—Mr. MASTERMAN said in reply: An employed married woman is entitled to sickness benefit under the ordinary conditions while she is incapable of work through illness resulting from pregnancy, in addition to the maternity benefit payable in respect of her own or her husband's insurance, and without regard to the date at which that benefit is due. Sickness benefit is payable from the fourth day of her being rendered incapable of work by illness, and is payable while she so remains incapable both before and after confinement.

Answering Mr. FRED HALL (Dulwich) Mr. MASTERMAN said: If both parents are insured persons 30*s.* is, under the ordinary conditions, payable as maternity benefit in respect of the husband's insurance, while his wife is ordinarily entitled to sickness benefit at the rate of 7*s.* 6*d.* a week from the fourth day of being rendered incapable of work.

Payment of Panel Practitioners.

In reply to COLONEL WESTON, Mr. MASTERMAN said: A medical man is entitled under his contract with the Insurance Committee to be credited with a sum of 7*s.* in respect of each insured person for whose treatment he is responsible for the whole year. It follows that a deduction must be made from this sum in respect of every insured person for whom he ceases to be responsible during any portion of that year, in order to pay the medical man who is in fact responsible for his treatment during that period.

Unallocated Insured Patients and Medical Institutes.

Mr. WORTHINGTON EVANS asked the Secretary to the Treasury whether Insurance Committees had power to allocate members who had not selected a doctor to medical institutes; and whether such allocation was being made by the Wolverhampton Insurance Committee with the consent of the Insurance Commissioners.—Mr. MASTERMAN replied: The answer to the first part of the question is in the negative, and no such proposals have been submitted to the Commissioners by the Wolverhampton Insurance Committee.

Payments to Medical Institutes.

Mr. WORTHINGTON EVANS asked the Secretary to the Treasury whether payments had been withheld from medical institutes for medical benefit till recently; whether only 1*s.* 3*d.* per head was being paid for the quarter as against 1*s.* 9*d.* to the committees for the panel doctors; whether many unnecessary forms had to be signed by the patients at the institutes; and for what reason these difficulties were put in the way of the institutes.—Mr. MASTERMAN answered: Payments have been made in all cases in which the institute has been able to give the Insurance Committee and the Commissioners a reasonable assurance that it will be able to fulfil the conditions of medical benefit. The amount per member is not necessarily 1*s.* 9*d.* per quarter, but such sum not exceeding 1*s.* 9*d.* per quarter as is actually expended in providing medical attendance and treatment, and the amount of the advance payments must be limited accordingly, pending evidence as to the expenses actually incurred. Where there is satisfactory evidence that more than 1*s.* 3*d.* has been expended more than 1*s.* 3*d.* has been paid. The answer to the third part of the question is in the negative, and the fourth part does not arise.

Approved Societies and Hospital Contributions.

Mr. JAMES MASON asked the Secretary to the Treasury whether he proposed to take any steps to ensure that the sick benefit of insured persons resident as patients in voluntary hospitals, and who had no dependents requiring such benefit, should be paid to such hospitals as a contribution towards the cost of the maintenance provided.—Mr. MASTERMAN replied: A circular is being prepared for issue to all societies explaining that they are able to make payments to hospitals in respect of the treatment of their members if agreements have been concluded for the purpose.

TUESDAY, JUNE 3RD.

Allocation of Insured Persons at Woodbridge.

Mr. HUNT asked the Secretary to the Treasury whether his attention had been called to the fact that over 600 insured persons living at Woodbridge had been allocated to doctors living about six miles away; and what steps he proposed to take to provide these people with medical attendance within a reasonable distance.—Mr. MASTERMAN answered: I have made inquiries about this matter, and I find that a scheme was drawn up for adoption by the Insurance Committee providing for the allocation amongst three doctors living at Wickham Market of about 600 persons living in Woodbridge. Any insured person living at Woodbridge could have chosen a Woodbridge doctor. I have reason to believe that the Insurance Committee are now considering an arrangement which will make the proposed allocation unnecessary.

Sanatorium Benefit in Scotland.

Mr. JAMES HOGGE asked the Secretary for Scotland what action he intended to take in the case of county councils in Scotland who were refusing to administer the sanatorium section of the Insurance Act.—Mr. MASTERMAN (who replied) said: I am informed that in every case the Scottish county councils are taking steps to provide accommodation for tuberculous insured persons under Section 64 of the National Insurance Act, but if the honourable member will furnish me with particulars of the case to which he refers I shall be glad to make inquiry.

Medical Benefit in the Highlands.

Major HOPE asked the Secretary to the Treasury whether the whole of the special grant of £10,000 for medical benefit and service in the Highland and Islands of Scotland was to be expended for the benefit of insured persons only.—Mr. MASTERMAN replied: The answer is in the affirmative.

Health Conditions in Lettermore.

Mr. O'MALLEY asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Lettermore island had been acquired by the Congested Districts Board; if so, whether immediate steps would be taken to erect cottages for the islanders and assist in obtaining a supply of pure water; whether he was aware that the recurrent outbreaks of fever in this district were due to the poverty of the people and to the defective water-supply; and whether, in view of these facts, he would urge upon the Congested Districts Board and the Local Government Board to dispense with their usual red-tape procedure and carry out the necessary reforms without delay.—Mr. BIRRELL wrote in reply: Lettermore Island has not yet been acquired by the Congested Districts Board, but they have decided to make an offer for the estate of which it forms part. When they acquire it they will at once begin to help the tenants to improve their dwellings and out-offices and to get rid of the insanitary surroundings which are one of the causes of enteric fever which breaks out from time to time in the district. The Board are also considering the establishment of a cottage hospital. A suitable and convenient water-supply for the scattered people of this extensive and rocky district is of the first importance if their health is to be secured, but it is a matter of very great difficulty quite apart from the poverty of the ratepayers. It is practically impossible to provide water within a convenient distance of every house, and in the absence of such a supply it is very hard to prevent people using water from doubtful sources. Both the Congested Districts Board and the Local Government Board are fully alive to the facts of the case and will do all they can within their legal powers for these poor people, and any

suggestions the honourable Member may wish to make will receive my most careful consideration.

Sight Tests in the Mercantile Marine.

Mr. PETO asked the President of the Board of Trade whether his attention had been drawn to a memorial signed by 30 leading ophthalmologists who were of opinion that the sight tests of the Board of Trade were not satisfactory; and, if so, whether he would now reconsider the whole question of these tests.—Mr. BUXTON replied: My attention has been drawn to a statement published in a medical journal to which the honourable Member presumably refers. Careful consideration will be given to these and any other criticisms, but as at present advised I do not think that they disclose any sufficient ground for reopening the question of the tests.

Mental Deficiency Bill.

The debate on the motion for the second reading of the Mental Deficiency Bill was resumed.

The second reading was carried by a large majority.

Mental Deficiency and Lunacy (Scotland) Bill.

Mr. MCKINNON WOOD (Secretary for Scotland) moved the second reading of the Mental Deficiency and Lunacy (Scotland) Bill.

The debate on the motion was shortly afterwards adjourned.

WEDNESDAY, JUNE 4TH.

Sickness Experience of Friendly Societies.

Mr. GODFREY LOCKER-LAMPSON asked the Secretary to the Treasury whether any information had reached him to show that the sickness experience of Friendly Societies on the voluntary side of their work had enormously increased since the passage of the National Insurance Act.—Mr. MASTERMAN answered: No representations of the kind referred to in the question have been received by the Registrar of Friendly Societies, but I should be much interested to receive any evidence with which the honourable Member can supply me on this subject.

BOOKS, ETC., RECEIVED.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION (Dr. Charles G. Wagner, Secretary, Binghamton State Hospital, Binghamton, N.Y.).
Proceedings of the American Medico-Psychological Association at the Sixty-Eighth Annual Meeting held in Atlantic City, N.J., May 28th–31st, 1912. Price not stated.

BAILLIÈRE, J. B., ET FILS, Paris.
Le Cœur et l'Aorte. Études de Radiologie clinique. Par H. Vaquez, Professeur agrégé à la Faculté de Médecine de Paris, Médecin de l'Hôpital Saint-Antoine; et E. Bordet, Chef de Laboratoire Adjoint à la Faculté de Médecine de Paris. Price Fr.15.
Nouveau Traité de Chirurgie Clinique et Opératoire. Publié en Fascicules sous la direction de A. Le Dentu et Pierre Delbet. XXI. Maladies du Cou. Par Joseph Arrou, Pierre Fredet, et Ernest Desmarest, Chirurgiens des Hôpitaux de Paris. Price, paper, Fr.4; boards, Fr.5.50.

BLACK, ADAM AND CHARLES, London.
The Social Guide, 1913. Edited by Mrs. Hugh Adams and Edith A. Browne. Fourth Year of Issue. Price 2*s.* 6*d.* net.

COLLINS, WILLIAM, SONS, AND CO., LIMITED, Bridewell-place, New Bridge-street, London, E.C.; and 144, Cathedral-street, Glasgow.
The Nation's Library. Price, cloth, 1*s.* net; leather, 2*s.* net.
Eugenics. By Edgar Schuster.
Modern Views of Education. By Thiselton Mark, B.Sc.
Small Holdings. By James Long.
Socialism and Syndicalism. By Philip Snowden, M.P.
Sane Trade-Unionism. By W. V. Osborne, of the Osborne Judgment.
Industrial Germany. By William Harbutt Dawson.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.
A Manual of Venereal Diseases. Introduction by Sir Alfred Keogh, K.C.B. History, Statistics, Invaliding, &c., by Brevet-Colonel C. H. Melville, R.A.M.C. Clinical Pathology and Bacteriology, by Brevet-Colonel Sir William Leishman, K.H.P., F.R.S., R.A.M.C. Clinical Course and Treatment, by Major C. E. Pollock, R.A.M.C. Second edition. Revised and largely rewritten, with new matter, by Major L. W. Harrison, R.A.M.C. Price 10*s.* 6*d.* net.

HIRSCHWALD, AUGUST, Berlin.
Der normale menstruelle Zyklus der Uterusschleimhaut. Seine Anatomie, dargestellt in Text und 25 Bildern auf 20 Tafeln. Von Dr. med. Robert Schröder, I. Assistenzarzt der Universitäts-Frauenklinik zu Rostock. Gezeichnet von Fräulein Ella Burchard, Rostock. Price M.16.

LEHMANN, J. F., München.
Abhandlungen über Salvarsan. Gesammelt und mit einer Vorrede und Schlussbemerkungen herausgegeben von Prof. Paul Ehrlich, Wirkl. Geh. Rat, Direktor des Instituts für experimentelle Therapie. Band III. Price, paper, M.10; bound, M.12.

LIPPINCOTT (J. B.) COMPANY, London and Philadelphia.
Diseases of the Heart and Aorta. By Arthur Douglass Hirschfelder, M.D., Associate in Medicine, Johns Hopkins University. With an Introductory Note by Lewellys F. Barker, M.D., LL.D., Professor of Medicine, Johns Hopkins University. Second edition. Price 25*s.* net.
The Diseases of Children. A Work for the Practising Physician. Edited by Dr. M. Pfaundler, Professor of Children's Diseases, and Director of the Children's Clinic at the University of Munich; and Dr. A. Schlossmann, Professor of Children's Diseases and Director of the Children's Clinic at the Medical Academy in Dusseldorf. English Translation. Edited by Henry L. K. Shaw, M.D., Albany, N.Y., Clinical Professor, Diseases of Children, Albany Medical College; and Linnæus La Fétra, M.D., New York, N.Y., Instructor of Diseases of Children, Columbia University. With an Introduction by L. Emmett Holt, M.D., New York, N.Y., Professor of Pediatrics, Columbia University. In five volumes. Second edition. Price £5 5*s.* net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.
Primary Artisan Education. By W. P. Welpton, B.Sc., Lecturer in Education and Master of Method in the University of Leeds. Price 3*s.* 6*d.* net.

SAUNDERS (W. B.) COMPANY, London and Philadelphia.
The Modern Hospital: its Inspiration: its Architecture: its Equipment: its Operation. By John Allan Hornsby, M.D., Secretary, Hospital Section, American Medical Association, and Richard E. Schmidt, Architect, Fellow American Institute of Architects. Price 30*s.* net.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, London, W.C.
Bandaging Made Easy. By M. R. Hosking, Sister-in-Charge, Tredegar House, Bow, E. Price 1*s.* net.
How to Read and Write Prescriptions. A Pocket Guide for Nurses, Students, and Dispensers. By Lytton Maitland, M.D. Lond., B.S., D.P.H. Camb. Price 1*s.* net.
Essentials of Fever Nursing. By Lytton Maitland, M.D. Lond., B.S., D.P.H. Camb. Price 1*s.* net.
Manual and Atlas of Swedish Exercises. By Thomas D. Luke, M.D., F.R.C.S., Medical Superintendent, Peebles Hydro and Kur Hotel. Price 1*s.* net.

URBAN UND SCHWARZENBERG, Berlin und Wien.
Die Störungen der männlichen Geschlechtsfunktionen und ihre Behandlung. Von Dr. Emil Kantorowicz, Arzt. Price, bound, M.3.
Fortschritte der Naturwissenschaftlichen Forschung. Herausgegeben von Prof. Dr. Emil Abderhalden, Direktor des Physiologischen Institutes der Universität Halle a.S. Achter Band. Price, paper, M.15; bound, M.17.
Skizzen eines Feldarztes aus Montenegro. Von Dr. phil. et med. Hermann von Schrötter, Mitglied der nach Montenegro entsandten Mission des Oesterreichischen Roten Kreuzes. Price M.3.

WILSON, EFFINGHAM, 54, Threadneedle-street, London, E.C.
Income-Tax. How to Make the Return and Prepare Accounts in Support, How to Recover Excess Paid, or obtain Reduction. With Appendix of Settled Cases. By F. B. Leeming, Member of the Central Association of Accountants. Third edition, revised. Price 2*s.* 6*d.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

ADAMS, E. W., M.D. Lond., has been appointed Honorary Physician to the Children's Hospital, Sheffield.

BACH, E., M.B., B.S., M.R.C.S., L.R.C.P. Lond., has been appointed Casualty Medical Officer to University College Hospital.

CARMALT-JONES, D. W., M.D. Oxon., M.R.C.P. Lond., has been appointed Physician to the Westminster Hospital.

CARRUTHERS, D., L.R.C.P. & S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Muirkirk District of the county of Ayr.

CHARTERIS, F. J., M.B., Ch.B. Glasg., has been appointed Assistant Physician to the Western Infirmary, Glasgow.

CLARK, G. H., M.B., Ch.B. Glasg., has been appointed Dispensary Physician at the Western Infirmary Glasgow.

DAW, S. W., F.R.C.S. Eng., has been appointed Assistant Honorary Surgeon to the General Infirmary, Leeds.

DOBSON, J. F., M.S. Lond., F.R.C.S. Eng., has been appointed Honorary Surgeon to the General Infirmary, Leeds.

EDE, CUTHBERT, M.B., B.C. Cantab., has been appointed Medical Officer for the No. 2 District by the Calne (Wilts) Board of Guardians.

ETLINGER, F. KINCAID, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Superintendent of Pinewood Sanatorium.

EVANS, D. R., M.B., B.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Clwtybont District of the county of Carnarvon.

FINZI, N. S., M.B. Lond., has been appointed Chief Assistant in the X Ray Department of St. Bartholomew's Hospital.

GALLOWAY, ANDREW F., M.D., C.M. Glasg., has been appointed Surgeon to the City of London and East London Dispensary.

GODFREY, J. E., M.B., C.M. Edin., has been reappointed Surgeon-General and Chairman to the Local Government Board of British Guiana.

HIGGIN, ROBERT FRANCIS, M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Newton Abbot (Devon) Hospital and Dispensary.

KILPATRICK, D. R., M.D. Glasg., has been appointed Dispensary Physician at the Western Infirmary, Glasgow.

LAWRENCE, W. BERTRAM, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Tuberculosis Hospital, Cardiff, under the King Edward VII. Welsh National Memorial.

LEECH, ERNEST BOSDIN, M.D., B.C. Cantab., D.P.H. Vict., has been appointed Honorary Assistant Physician to the Manchester Royal Infirmary.

MOORE, C. A., M.S. Lond., Ch.M. Bristol, F.R.C.S. Eng., has been appointed Surgeon to the Cossham Memorial Hospital, Kingswood, Bristol.

MURRAY, H. LEITH, M.D., Ch.B. Aberd., has been appointed Honorary Assistant Surgeon to the Hospital for Women, Liverpool.

PATRICK, J. KING, M.B., Ch.B., B.Sc. Glasg., D.P.H., has been appointed Deputy Medical Officer of Health of the Metropolitan Borough of Hampstead.

RAMSAY, MAXWELL, M.B., Ch.B. Edin., has been appointed House Surgeon at the Royal Albert Hospital, Devonport.

THOMAS, H. M., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Fishguard District of the county of Pembroke.

THOMAS, J. LYNN, C.B., F.R.C.S. Eng., has been appointed Honorary Consulting Surgeon to the Welsh National Memorial Association.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ALL SAINTS' HOSPITAL FOR GENITO-URINARY DISEASES, Vauxhall Bridge-road, S.W.—Three Assistant Surgeons, Two Anæsthetists, and a Bacteriologist.

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BARNSLEY, BECKETT HOSPITAL AND DISPENSARY.—Junior House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and laundry.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—Junior Resident House Surgeon. Salary £100 per annum, with board and residence.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board and laundry.

BIRKENHEAD UNION INFIRMARY AND WORKHOUSE.—Senior Resident Assistant Medical Officer. Salary £150 per annum, with board, apartments, &c.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Third House Surgeon. Salary £75 per annum, with board, rooms, &c.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for afternoon attendance for three months. Salary at rate of 52 guineas per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeons, unmarried. Salary £200 per annum, with rooms, fire, light, and attendance.

BIRMINGHAM, QUEEN'S HOSPITAL.—Two House Surgeons for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BIRMINGHAM UNIVERSITY.—Junior Demonstrator in Anatomy. Salary £150 per annum.

BOLTON INFIRMARY AND DISPENSARY.—Third House Surgeon. Salary £90 per annum, with apartments, board, and attendance.

BOOTLE BOROUGH HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

BOURNEMOUTH, ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House Surgeon for six months, unmarried. Salary £30 per annum, with board, lodging, and washing.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BRISTOL GENERAL HOSPITAL.—Casualty House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, &c.

BROMSGROVE, WORCESTERSHIRE ASYLUM.—Second Assistant Medical Officer. Salary £225 per annum, with quarters, board, washing, and attendance.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

CAMBERWELL INFIRMARY, Brunswick-square, and GORDON-ROAD WORKHOUSE, Peckham.—Second Assistant Medical Officer. Salary £150 per annum, with apartments, board, and washing. Also Third Assistant Medical Officer for the Infirmary. Salary £140 per annum, with apartments, board, and washing.

CANCER HOSPITAL, Fulham-road, London, S.W.—Senior and Junior House Surgeons for six months. Salaries £80 and £70 per annum respectively.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, washing, and attendance.

CANTERBURY, KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer, unmarried. Salary £220 per annum, with apartments, attendance, laundry, &c.

CHELSEA HOSPITAL FOR WOMEN.—Anæsthetist. Salary £21 per annum. Also Clinical Assistants for three months.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board, apartments, and laundry.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistants in the Out-patient Department.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—Senior House Surgeon, House Physician, and Junior House Surgeon. Salary of former £120 per annum, and of two latter £90 per annum, with residence, board, and laundry.

CUMBERLAND COUNTY COUNCIL.—Tuberculosis Officer. Salary £350 per annum.

DEPTFORD, METROPOLITAN BOROUGH OF.—Medical Officer to take Charge of Tuberculosis Dispensary. Salary £300 per annum.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—Assistant House Surgeon. Salary £65 per annum, with board and washing.

EDMONTON INFIRMARY, 77, Bridport-road, Upper Edmonton.—Second Assistant Medical Officer, unmarried. Salary £140 per annum, with residential allowances.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Surgeon for five months. Salary at rate of £75 per annum, with board, residence, and washing.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of 100 guineas per annum, with board, apartments, and washing.

EXMINSTER, DEVON COUNTY ASYLUM.—Third and Fourth Assistant Medical Officers. Salary £200 per annum, with board, laundry, and apartments.

FOLKESTONE, ROYAL VICTORIA HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

FULHAM DISPENSARY FOR THE PREVENTION OF TUBERCULOSIS.—Assistant Medical Officer. Salary £250 per annum.

GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary £200 per annum.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HITHER GREEN, S.E., PARK HOSPITAL FOR CHILDREN.—Senior Assistant Medical Officer. Salary £250 per annum, with board, lodging, and washing. Also Temporary Assistant Medical Officer for about two months. Salary at rate of £150 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician and House Surgeons, unmarried, for six months. Salary £30, with washing allowance, board, and residence.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

KING'S COLLEGE HOSPITAL.—Resident Casualty Officer and Resident Assistant Clinical Pathologist.

LANCASTER, COUNTY ASYLUM.—Assistant Medical Officer. Salary £200 per annum, with board, apartments, washing, and attendance.

LANCASTER ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £110 per annum, with residence, board, attendance, and washing.

LEEDS GENERAL INFIRMARY.—Resident Surgical Officer. Salary £150 per annum, with board, residence, and laundry. Also House Physician. Board, residence, and laundry provided.

LEICESTER CORPORATION TUBERCULOSIS DISPENSARY.—Assistant Medical Officer. Salary £250 per annum.

LEICESTER, LEICESTERSHIRE AND RUTLAND ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

LICHFIELD, COUNTY MENTAL HOSPITAL, Burntwood.—Junior Assistant Medical Officer, unmarried. Salary £210 per annum, with apartments, board, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, residence, and washing.

LINCOLN MENTAL HOSPITAL, The Lawn, Lincoln.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, &c.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Mount Pleasant.—Honorary Assistant Physician.

LIVERPOOL STANLEY HOSPITAL.—Two House Physicians. Salary £75 per annum each, with board, residence, and laundry.

LONDON COUNTY COUNCIL, PECKHAM CENTRE FOR THE TREATMENT OF SCHOOL CHILDREN.—Three Medical Officers for X Ray Treatment of Ringworm, Three Medical Officers for Minor Ailments, One Anæsthetist, and Two Medical Officers for Nose, Throat, and Ear Cases. Salary £50 per annum for one half day's work a week. Also One Medical Officer for Errors of Refraction. Salary £75 per annum for three half days' work in each fortnight. Also Two Qualified Dentists. Salary £100 each for two half days' work each week.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrar.

LONDON LOCK HOSPITAL.—Pathologist. Salary £50 per annum. FEMALE HOSPITAL: House Surgeon and Assistant House Surgeon. Salary £100 and £80 per annum respectively, with board, lodging, and washing. MALE HOSPITAL: House Surgeon. Salary £100 per annum, with board, lodging, and washing.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £120 per annum, with rooms, attendance, board, and washing.

LOWESTOFT HOSPITAL.—House Surgeon, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.

MANCHESTER, BAGULEY SANATORIUM FOR TREATMENT OF TUBERCULOSIS.—Assistant Medical Officer, unmarried. Salary £200 per annum, with board and residence.

MANCHESTER, COUNTY ASYLUM, Prestwich.—Locum Tenens for six to eight weeks, unmarried.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—Junior House Surgeon. Salary £100 per annum, with apartments and board.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer. Salary £35 per annum.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

MARGARET-STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, Margaret-street, Cavendish-square, W.—Assistant Honorary Physician.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Medical Officer in Charge of Electrical Department. Salary £52 10s. per annum.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—House Physician for six months. Salary at rate of £100 per annum, with board, attendance, and laundry.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—House Physician. Salary £75 per annum, with board, residence, and washing.

NESTING AND LUNNASTING PARISH COUNCIL.—Medical Officer. Salary £50 per annum.

NEWCASTLE-UPON-TYNE DISPENSARY.—Visiting Medical Assistants. Salary £200 per annum.

NEW ZEALAND GOVERNMENT, TE WAIKATO SANATORIUM.—Medical Superintendent. Salary £500 per annum, with house, &c.

NORTHAMPTON COUNTY ASYLUM, Berry Wood, Northampton.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Radiographer.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Physician and House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, washing, &c.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.
ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board and residence. Also Clinical Assistants.
ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Female Assistant to Clinical Pathologist. Also Female Assistant Anæsthetist. Salary £50 each per annum.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, lodging, and washing.
ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Senior Resident Medical Officer. Salary at rate of £70 per annum, with board and washing.
ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with board, residence, and laundry.
SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—Assistant House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.
SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.
SHREWSBURY, COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £170 per annum, with board, apartments, laundry, &c.
SOUTHAMPTON, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £200 per annum, with residence, board, and washing
SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.
SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £80 per annum, with rooms, board, and washing.
SOUTH LONDON HOSPITAL FOR WOMEN.—Medical Woman to take charge of X Ray Department.
SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £90 per annum, with residence, board, and washing.
STIRLINGSHIRE EDUCATION COMMITTEE.—School Medical Inspector. Salary £300 per annum.
STOKE-ON-TRENT INFECTIOUS DISEASES HOSPITAL, Bucknall.—Resident Assistant Medical Officer (female). Salary £100 per annum, with apartments, board, washing, and attendance.
TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and laundry.
WAKEFIELD GENERAL HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, with board, lodgings, and washing.
WESTERN OPHTHALMIC HOSPITAL, Marylebone-road, W.—Two House Surgeons. Salaries at rate of £50 and £40 per annum respectively.
WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, W.—Resident House Physician for six months. Salary at rate of £100 per annum.
WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House Physician. Salary at rate of £75 per annum, with board, residence, and washing.
WEST HAM MUNICIPAL TUBERCULOSIS DISPENSARY.—Tuberculosis Officer. Salary £500 per annum.
WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with board and residence.
WOKINGHAM, PINEWOOD SANATORIUM.—Resident Assistant Medical Officer. Salary £150 per annum.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, rooms, and laundry.
WORCESTER GENERAL INFIRMARY.—House Physician. Salary £100 per annum, with board, residence, and washing.
YORK, NORTH RIDING ASYLUM, Clifton.—Second Assistant Medical Officer. Salary £150 per annum, with board, apartments, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

MACNAUGHTON-JONES.—On May 30th, at Fontenoy, Finchley-road, N.W., to Dr. and Mrs. Macnaughton-Jones, a son.
ROTHERHAM.—On May 27th, at Woodford, Chantry-lane, Grimsby, to Dr. and Mrs. Frank H. Rotherham, a daughter.
SCOTT.—On May 29th, at Liss, Hants, the wife of William Lochhead Scott, M.D., of a son.

MARRIAGES.

BANISTER—DIX.—On June 2nd, at Marylebone Parish Church, by the Rev. Howard Banister, Senior Curate of Great Yarmouth Parish Church (brother of the bridegroom), John Bright Banister, M.A., M.D., M.R.C.P., of 27, Welbeck-street, W., eldest son of Howard C. Banister, of Blundellsands, to Jacqueline Marion Marshall Dix, only daughter of Mrs. Dix, of London.
FAIRLIE—WHITTAKER.—On May 31st, at Regent-square Presbyterian Church, London, William Miller Fairlie, M.D., to Lizzie Gertrude, third daughter of the Right Hon. Sir Thomas P. Whittaker, M.P., and Lady Whittaker.
NEEDHAM—NEWMAN.—On May 31st, at St. George's Church, Campden Hill, Frederick Needham, M.D., to Helen Millicent Sherwood Newman, daughter of the late William L. Newman, of York.

DEATHS.

TARGETT.—On May 26th, James Henry Targett, Senior Obstetric Physician to Guy's Hospital, in his 51st year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE PRUSSIAN PANEL DOCTOR.

IN the course of a discussion which has been going on in the correspondence columns of the Berlin newspapers on the strained relations existing between the medical profession and the insurance committees, the Prussian Government is said to have in view a proposal for engaging 3000 medical practitioners and thus forming a State Medical Service. It is thought by many, however, that the mention of this scheme is only for the purpose of finding out how far it would meet with general acceptance. The present state of things is most disquieting to the authorities.

ELECTRODE FOR NAPE OF NECK.

To the Editor of THE LANCET.

SIR,—In these days of ionic medication and the more extensive use of electricity generally, especially of galvanism, the electrode shown below, which I devised many years ago, and which I have used constantly ever since, may be of interest. When it is desired to hold one pole to the nape of the neck, as is often the case when applying electricity to the face, for instance (or to the eyes, as in my own practice),

the straight handle usually supplied by the makers is not a very convenient tool. By bending the brass rod which carries the applicator (sponge, carbon, or metal plate) into a curve something like a note of interrogation the patient can himself keep the pole at the desired spot without any trouble or fatigue.—I am, Sir, yours faithfully,

A. ST. CLAIR BUXTON, F.R.C.S. Edin.,
Consulting Surgeon to the Western Ophthalmic Hospital.

Weymouth-street, W., May 28th, 1913.

THE INTERNATIONAL FEDERATION FOR THE ABOLITION OF STATE REGULATION OF VICE.

To the Editor of THE LANCET.

SIR,—Your attention is very specially directed to the Congress of the International Federation for the Abolition of State Regulation of Vice to be held in Paris at the Musée Sociale, June 8th to 12th.

This Congress ought to be of quite exceptional interest. Paris has for long been the home of the regulation system; both in England and America to-day a very large number of people believe it would be much better if "puritanical fanatics" would allow it to be adopted elsewhere. It will be deeply interesting to hear physicians, lawyers, and statesmen exposing in Paris itself the iniquities of this "French system," which is supported, not by public opinion, but by a combination of vested interests and political cowardice and public apathy.

The speakers from this country include Dr. Helen Wilson and Sir Victor Horsley.

Tickets can be obtained from M. Otto Pierson, 97, Rue de Courcelles, Paris.

I am, Sir, yours faithfully,

F. M. MCNEILL,
Acting Secretary of the British Committee.

19, Tothill-street, Westminster, S.W., June 2nd, 1913.

MALINGERING: AN EXPLANATION.

To the Editor of THE LANCET.

SIR,—In a recent address on "Malingering, Valetudinarianism, and their Prevention," delivered before the Pathological Society of Manchester, and published in the *British Medical Journal* of April 19th, 1913, Dr. Byrom Bramwell referred to some misleading statements which he said had been made at the last meeting of the British Medical Association in the course of discussion on medical training for the detection of malingering, with regard to the reaction of degeneration and the electrical testing generally of muscles. In the course of his lecture he said: "In a recently published book on malingering equally erroneous statements as to the effect of electricity in cases of paralysis and of the value of electrical testing in the diagnosis of malingering are made."

I have been in communication with Dr. Byrom Bramwell, and I have his authority for stating that his criticisms did not refer to my book on malingering, but to an entirely different work.

I am, Sir, yours faithfully,

Porchester-terrace, W. May 28th, 1913 JOHN COLLIE.

THE CRUISE OF THE MIDGE.

To the Editor of THE LANCET.

SIR,—If "A Victimised Chemist" will with a camel-hair brush apply some tinct. lavandulæ to the edge of his cap or hat which comes in contact with his head, he will baffle the enemy—at all events, that has been the experience during the last few days of,

Yours faithfully,

June 2nd, 1913. M.B.

CORRECT COSTUME.

To the Editor of THE LANCET.

SIR,—It would be a relief to many to know what is generally considered to be the correct costume for a practitioner in the suburbs of London. I am installed in a suburb some five miles from Charing Cross. The local doctors all wear top hats. The adjoining district—rather better class—glories in doctors who wear lounge suits. I began a year ago by wearing lounge suits; now I am compelled to wear a top hat, owing to "public comment." A discussion of the question would be interesting. I am, Sir, yours faithfully,

June 3rd, 1913. M.S.

Midlands.—1. The newcomer is not obliged to notify his arrival to the other practitioners of the district, but it is customary for him to call upon them and inform them of his intention to practise. 2. An announcement in any shape in the lay press would be regarded by the General Medical Council as a form of advertisement.

Mr. Arthur Hart.—(1) The superficial area per patient should be from 300–500 square feet; (2) the cubic area about 1700 to 2000 cubic feet; (3) the first specification is permissible if sunlight can penetrate to the back of the ward, but the second is preferable.

M.D., 10, Southwick-street, Hyde Park, W., asks for information from readers of THE LANCET as to a home or school for a child of weak intellect. Moderate payment can be made.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—Commendatore Boni will give an Address on Recent Researches on the Palatine in Relation to Geology, Ethnology, and Physics.—Dr. B. Blacklock and Dr. W. Yorke: The Trypanosomes causing Dourine (Mal de Coit or Beschälseuche) (communicated by Sir Ronald Ross, K.C.B.).—Mr. J. G. Thomson and Dr. D. Thomson: The Growth and Sporulation of the Benign and Malignant Tertian Malarial Parasites in the Culture Tube and in the Human Host (communicated by Sir Ronald Ross, K.C.B.).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY.

GENERAL MEETING OF FELLOWS at 5 P.M.
Election of Candidates for Fellowship.

SECTION OF SURGERY (Hon. Secretaries—James Berry, J. Murray): at 5.30 P.M.

Provincial Meeting at the General Hospital, Birmingham.

Papers:

Mr. Lawford Knaggs: Retro-peritoneal Rupture of the Duodenum.

Mr. Jonathan Hutchinson: (1) A Note on the Treatment of Dupuytren's Contraction by an Improved Method; (2) The Use of Kangaroo Tendon for Buried Sutures.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. S. E. Dore: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. Carr: Pneumothorax.

TUESDAY.—4 P.M., Dr. J. Parkinson: Clinique (Medical). 5.15 P.M., Lecture:—Mr. H. S. Clogg: Hernia in Children.

WEDNESDAY.—4 P.M., Mr. D. C. L. Fitzwilliams: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. O. Grunbaum: The Treatment of Hæmatemesis.

THURSDAY.—4 P.M., Mr. A. J. Walton: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. W. H. Clayton-Greene.

FRIDAY.—4 P.M., Dr. D. McKenzie: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Pernet: Differential Diagnosis in Dermatology.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin. 5 P.M., Lecture:—Dr. Pernet: Differential Diagnosis in Dermatology.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Pernet: Differential Diagnosis in Dermatology.

THURSDAY.—10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Morton: The Use of Solid Carbon Dioxide Snow.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Lecture:—Dr. Owen: Practical Medicine. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin. 5 P.M., Lecture:—Dr. Morton: The X Ray Examination of the Digestive System.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

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MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. Singer: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir Malcolm Morris: Skin. 3.15 P.M., Special Lecture:—Dr. Rankin: Insomnia.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. Dr. A. Davies: Pathological Demonstration. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery. 4.30 P.M., Special Lecture:—Mr. Choyce: Acromegaly.

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WEDNESDAY.—4.30 P.M., Lecture:—Dr. Burrell: Tuberculosis of the Mediastinal Glands in Children.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Batten: Cerebellar Disease.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard.

QUEEN'S HOSPITAL FOR CHILDREN, Board Room of the Hospital, Hackney-road, N.E.

TUESDAY.—4 P.M., Mr. A. S. B. Bankart: Paralysis and Paralytic Deformities in Children.

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), London Hospital, Mile End-road, E.

Course of Lectures on the Psychoses and Neuroses of Children:—

THURSDAY.—2 P.M., Dr. F. Warner: Motor Signs of Brain Action and Status.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

THURSDAY.—6 P.M., Dr. K. Sibley: Alopecia and its Treatment, with Illustrative Cases.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. W. H. Hey: Surgical Cases for Diagnosis. (Post-Graduate Clinic.)

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MONDAY.—10 A.M., Obstetrical Lecture: Obstetrical Diagnosis (continued). 11 A.M., Examination of Patients and Minor Operations.

TUESDAY.—10 A.M., Major Operations. 4 P.M., Class in Gynæcological Diagnosis.

WEDNESDAY.—10 A.M., Obstetrical Lecture: Pelvimetry. 11 A.M., Examination of Patients and Minor Operations.

THURSDAY.—10 A.M., Major Operations.

FRIDAY.—10 A.M., Gynæcological Lecture: Uterine Displacements. 11 A.M., Examination of Patients and Minor Operations. 4 P.M., Class in Gynæcological Diagnosis.

For further particulars of the above Lectures, &c., see Advertisement Pages.

A DIARY OF CONGRESSES.

We shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced:—

April 28th–Nov. 5th (Ghent).—International Exhibition.
May 22nd–June 7th (London, Olympia).—Royal Naval and Military Tournament.
,, 31st to October (London, Earl's Court).—Imperial Services Exhibition.
May–October (Leipdig).—First International Building Exhibition.
June 11th (open) (London, Crystal Palace).—Anglo-German Exhibition.
,, 16th and 17th (Minneapolis).—Fifteenth Annual Meeting of the American Proctologic Society.
,, 17th–20th (Minneapolis).—American Medical Association.
,, 24th (opens) (London).—Historical Medical Museum. (Organised by Mr. Henry S. Wellcome.)
,, 24th–27th (London, Ontario).—Canadian Medical Association.
,, 26th–28th (Oxford).—Fourth Annual Conference of the British Hospitals Association.
,, 27th (London, Inns of Court Hotel).—Conference of the Pure Food and Health Society of Great Britain.
,, 30th and July 1st (London, Guildhall).—Conference on Diet, Cookery, and Hygiene in Elementary Schools and Institutions.
July 7th–12th (Exeter).—Twenty-eighth Congress of the Royal Sanitary Institute.
,, 16th–18th (Oxford, Keble College).—Oxford Ophthalmological Congress.
,, 18th–25th (London).—Imperial Motor Transport Conference.
,, 21st–24th (London).—British Pharmaceutical Conference.
,, 22nd–25th (Brighton).—Eighty-first Annual Meeting of the British Medical Association.
Aug. 1st–3rd (Ghent).—Congress against the Adulteration and Deterioration of Foodstuffs.
,, 1st–5th (Brussels).—Third International Conference on Cancer.
,, 3rd–8th (London).—Sixth International Dental Congress.
,, 4th and 5th (London, Caxton Hall).—English-speaking Conference on Infant Mortality.
,, 6th–12th.—(London).—Seventeenth International Congress of Medicine.
,, 20th–26th (Ghent).—Third International Congress of Neurology and Psychiatry.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 4th, 1913.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 29	29·95	S.W.	...	125	79	62	59	67	Cloudy
,, 30	29·69	S.W.	0·50	129	81	62	63	68	Cloudy
,, 31	29·88	S.W.	...	115	66	54	52	58	Cloudy
June 1	30·09	N.E.	...	104	64	52	53	57	Cloudy
,, 2	30·14	S.W.	...	124	72	52	54	60	Fine
,, 3	30·07	S.W.	...	121	77	54	56	64	Fine
,, 4	30·04	S.W.	...	90	70	60	60	67	Cloudy

The following journals, magazines, &c., have been received:— Surgery, Gynecology and Obstetrics, Transvaal Medical Journal, South African Medical Review, Archiv für Experimentelle Pathologie und Pharmakologie, Journal of Nervous and Mental Disease, St. Bartholomew's Hospital Journal, Medical Bulletin of the University of Toronto, Homœopathic Recorder, Post Graduate (New York), Journal d'Urologie, Revue d'Hygiène, Therapeutic Gazette, Journal of the Royal Sanitary Institute, Archives of Internal Medicine, Polyclinic, Archives Générales de Médecine, Review of Neurology and Psychiatry, Malaria, Medical and Surgical Papers of Massachusetts General Hospital, Revista Médica del Uruguay, Tropical Diseases Bulletin, Journal of Obstetrics and Gynæcology of the British Empire.

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